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DEMONSTRATION AND ARGUMENT IN EVIDENCE OF THE TRUE FUNCTION OF THE SPLEEN, AND THE PHYSIOLOGY OF THE PLACENTA.

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THE subject of this paper has been so frequently made an object of speculation among scientific inquirers, and physiologists have so often been disappointed by the theorists whose attention it has occupied, that some doubts of its treatment now, in a rational manner, may be naturally expected to arise in the medical world; but not, it is hoped, with renewed justice on the present occasion. The anatomical arrangement and functional processes of the spleen and placenta have already been so scrutinised with the microscope, and so well known and obvious are the phenomena thus disclosed, that when their actual *physiology* is pointed out, some surprise may exist that it has so long escaped detection; for the physiology of the spleen and the placenta has hitherto been an opprobrium to the science. And yet the laws of physiology which are daily demonstrated in the schools would be signally infringed by any deviation from the arrangement that obtains in these organs, which, hitherto a mystery in medicine, is yet subservient to the simplest possible explanation. First,

CONCERNING THE SPLEEN.

We pass over those theories which regard this organ as one that is designed to secrete colouring matter for the blood, or to relieve the gastric circulation during an empty state of the stomach, or as a species of "packing" to occupy a space within the elastic walls of the abdomen (a purpose that is always effected, when necessary, by adipose deposit in the cellular tissue), or many other theories,—some of which are not tenable under any circumstances,—and come to the theory of Mr. Jackson, which has made some impression lately on the public mind, and which regards the spleen as an assistant circulatory organ. But to the doctrine of the spleen as an assistant of the portal circulation, as that theory supposes it to be, a chief physical objection exists. The splenic vein,—which is, in texture, weak and distensible under this supposed *vis-a-tergo*, not being supported (like its receptacle, the vena portæ of the liver) by the additional coat of the capsule of Glisson,—would inevitably be liable to varicose distention; just as the aorta, even, is sometimes subject to aneurismal distention, from the *vis-a-tergo* of the heart. But perhaps it is unnecessary to confute this theory here; for no one who understands the physical principles of the circulation wonders that it can be carried on (as in this instance of the portal circulation) through a second series of large and capillary vessels, the receiving vessels of the second series being, perhaps, rather less collapsible than the ordinary veins, as is the vena portæ, in consequence of the capsule of Glisson.

This theory of the use of the spleen may have been begotten by a desire to ascribe to it an office of some kind in the system, for certain diligent searchers have concluded that the spleen possesses no function whatever, and apparently with reason; for the presence of the spleen is not indispensible to the performance of the vital functions. That circumstance has itself rendered the precise physiological purpose of the spleen rather obscure.

The minute anatomical structure of the spleen can be perfectly detected in the manner which shall presently be described. The spleen comprises a mere congeries of capillary vessels. For on examining the circulation in that organ by the microscope (during life, of course), it becomes quite plain that it contains little or no intervening nervous parenchyma, or extra-vascular tissue; for there is positively no part of the field of vision where the blood corpuscules may not be seen to move with an even and regular course. The ultimate capillaries are remarkably uniform in size, carrying a single file of blood corpuscules; and, viewed in still life, the tissue looks like nothing else. Betwixt the capillaries there is certainly no intervening nondescript, or nervous, paren-

chyma, through which, in other tissues, the blood-globules are detained, and then jerk on. On the other hand, as before observed, their course is even and continuous, and to be seen at every part of the field of vision.

The apparent disposition of the capillary vessels in the dead tissue of the spleen is utterly fallacious as an index to their condition during life; for the blood corpuscules after death become packed together like mallow-seeds, arranging themselves in arborescent forms, but giving no correct idea of their true course and motion during life. But their peculiar and undetained course may sometimes be thus shown, effectually, in the mouse. The spleen of that smallest of quadrupeds is very thin, frequently fissured, and divided sometimes even into granules, which are placed on the ramifications of the splenic vessels, between the peritoneal layers, and in places possessing quite sufficient transparency to show the circulation, the demonstration of which, however, requires very delicate manipulation, as the supporting ligaments are hardly strong enough to maintain a weight of sixty grains without being torn away.

In the middle of a thin piece of wood, six inches long and two broad, let a hole be bored with a centre-bit, about an inch in diameter; then pierce the rest of the wood closely with small holes. With the help of an assistant, tie a doubled thread of soft darning-cotton, seven or eight inches long, around each foot of the animal. Holding it on its back (rather inclined to the left, on one side of the large hole of the wooden plane), tie the leg-strings through the ends of the plane, so as slightly to stretch the body of the mouse. Pass a large needle, also threaded with soft darning-cotton (several times doubled), through the holes of the wood, around the upper part of the chest, and around the pelvis, and the head, so as to hold the animal *in situ* with sufficient firmness. The operation itself will then occupy only a few seconds. Open up a triangular flap over the cardiac extremity of the stomach, and thread its angle back under the body of the animal, so as to give to it the due inclination over the aperture of the wooden plane. Raise the spleen from the cardiac end of the stomach, and pass a fine soft thread or two through those parts of it which are farthest from the root. Draw the spleen out, very carefully, across the aperture of the wood, fastening the threads on the other side, by pressing them on a piece of soft wax, purposely there placed. The spleen is now ready for inspection on the stage of the microscope. The panting of the animal would throw the organ in and out of the focus of vision; but that may be prevented by passing the organ under and against a cross pin. If the circulation be stopped, loosen some of the threads, and it will immediately be renewed. In the absence of the best instruments, I employ some resources which are not to be found in microscopes of the first class, particularly a method of exploration, by slowly and almost imperceptibly shifting the field of vision.

The usual question respecting the minute structure of the spleen is this,—Is the spleen divided into acini? It is considered to be difficult to conceive a vascular branch breaking up, or dividing into any other form. But if by this question it be meant to ask, Does each small vessel ramify in a glandular granule, as in the liver, or in any other parenchyma? then I reply, that the spleen is certainly not acinous in its ultimate construction, as the examination of the dead tissue would cause us to suppose. Several of the classes of capillary forms that are described by M. Berres will here be shown to be merely perspective effects, particularly his fourteenth, plexus vasculosus excentricus radiatus, and his sixteenth, plexus vasculosus pencilliformis erectilis. The one is seen horizontally, and the other vertically. But they are, in reality, the same in form. This may sometimes be plainly shown in the spleen of the mouse. But it is remarkable that the corpuscules move both to and from the centre of these forms, whilst even the angles of radiation are filled with other courses: it requires very attentive observation to follow them, and to detect the courses. But what is most remarkable, two capillary courses may sometimes be seen to run side by side, though in opposite directions, without sufficient distance existing between them to include anything more considerable than what may be supposed to be the coats of the vessels, but which latter are so imperceptible as to present the appearance of two opposite courses of corpuscules being contained in the same vessel. There can be but very little extra-vascular tissue, and I have concluded (and I think the above appearances will bear me out in the conclusion) that a capillary artery and vein sometimes run together, meeting another capillary artery and vein, the artery of the first merging into the vein of the latter, and *vice versâ*. But such appearances are only to be detected in particular places, and upon very attentive watching, as the whole field of vision is in motion, and from the doubling of the courses, and the consequent complicated perspective, it is extremely difficult to detect the disposition of these capillary vessels. I feel convinced that observers have been misled, in examining the dead tissue of the spleen, by the presence of the blood corpuscules, which pack together like halfpence throughout all the larger capillary vessels, causing a dark arborescence to pervade the whole tissue, but which does not exist in the living tissue at all.

Nothing but the motion of the blood corpuscules can give any correct idea of the disposition of the splenic capillaries, which I believe are arranged in loops. The finest in-

jections can throw no light upon this subject; but there is a mode of injecting the organ during life, which I believe may wash out the blood-globules entirely, showing that the arteries communicate directly with the veins, and not at all with the lymphatics, as most injections of the dead organ would lead one to suppose. This latter effect must be caused, I presume, by rupture. But let a ligature be tied around the splenic artery of a live mongrel, leaving the vein entire. Inject the artery with a fine size-injection, very slowly, and with hardly any pressure, and the injection will enter the veins only, and not the lymphatics.

In all other tissues that I have examined, excepting that of the spleen (and, I presume, the placenta), there is an evident and considerable extra-vascular tissue. But I believe that the only proper nutrient vessels in the spleen are the vasa vasorum. If the question be asked, "What does all this blood here?" we must be content to say that we simply see it passing.

The spleen and the placenta afford the most perfect specimens of simple capillary tissue, and its proper cytoblastema that are anywhere to be found; because the capillaries are there uncomplicated by any of the organic arrangements which necessarily modify their forms in other parts, as in muscle, &c. And, generally speaking, the only proper nutrient vessels of the spleen and the placenta are the vasa vasorum. The capillaries themselves (having in these organs another special purpose) are nourished, as capillaries are everywhere else, by imbibition; for the systemic capillaries are only employed in conveying the blood into contiguity with the general tissues, for their nutrition.

Once again I must refer, as I have frequently done elsewhere, to John Hunter's enigma,—Why does *arterial* blood flow from the *veins* in phlebotomy during syncope? Because the changes which render arterial blood venous are not effected during a state of faintness, and, therefore, the blood, if it circulate at all, returns by the veins unaltered—arterial blood still. Now, in the spleen and placenta there is, for the most part, no nutrition to be effected, and the arterial blood passes on by the veins; in the first organ to be added to the portal circulation, in the other for the nourishment and growth of the fœtus. But it may be asked, why does not the blood deposit its nourishment in the spleen and the placenta? Because the law of nutrition is, that it occurs only on the elective principle of *similia similibus*. In the abnormal production of tumours erroneous types are first accidentally laid down. (See, in my "Natural Order of Diseases," *Cachexiæ* and *Tumores*.)

The nerves of the spleen are supplied from the solar plexus and the eighth pair. They are, comparatively, very small, and are not nerves of sensation. There are belonging to it plenty of lymphatic vessels, which we may suppose to be necessary for removing the refuse material during nutrition, as in other parts; but there is no efferential duct; nor is there anything which is very apparent, as we well know, to imply the direct function of the organ. The whole is inclosed in a fibrous capsule, which is a prolongation from the aponeurotic tissue of the diaphragm, and is again covered by the peritoneum, nothing entering it but these small nerves, the lymphatics, the artery, and the vein.

The spleen, in ordinary language, is called *the melt*, which comes from the Saxon "milt," and this last from the Latin "miltus," signifying *scarlet*, or *vermilion*. The organ, also, was called, in the Latin language, "splen," because of its bright colour; for the blood of the splenic vein, when compared with that of the superior mesenteric, presents the characters of arterial blood. Hence the bright colour of the organ, which gives it a name. It is only some time after death that it acquires its dark and bluish tint.

When the spleen is extirpated a remarkable change is soon produced in the general nutrition. But what is more remarkable is the fact that the secretion of bile is diminished, as may be shown by examining the liver and gall-bladder of a spleenless sheep, and comparing it with those of others of entire organisation which have been slaughtered at the same time. Thus, by cutting off the addition of the splenic blood from the portal circulation, the liver loses its activity of secretion, the bowels become sluggish, and the animal is, in fact, a capon, and grows fat.

Now, the chief element of fat is *carbon*. The liver, as shown by Liebig, directly or indirectly, eliminates carbon from the system by secreting bile. We observe, also, that the bodies of stout persons generally contain small spleens, and a sluggish secretion of bile, and a consequent retention of carbon, in the form of fat; whilst thin persons almost invariably possess large spleens, and constantly an active secretion of bile.

Mr. Eagle, also, of the Kingsland-road, has practised the tying of the splenic artery (thus cutting off the splenic blood from the portal circulation) with the view of fattening animals. There may be a very natural prejudice against such interference with nature, but many of the best-informed graziers entertain the opinion that the quantity of real muscular tissue is, in the same adult animal, nearly always equal, and that a lean animal differs only from itself in a well-fed state as regards the quantity of fat (and carbon) which intermingles with the muscular fibrillæ, permeating the whole cellular tissue, not, I believe, even excepting the sarcolemma of the primitive fasciculi. It is certainly very difficult to detect any difference

between the flesh of a sheep which has been treated in this manner, and that of one which has been well fattened in the ordinary way. And if the opinion of the graziers, above alluded to, be true (and I am inclined to believe it to be so from what I have seen), this may be a valuable hint. We know that the muscular flesh of a fat animal is superior to that of a lean one; and if the fat constitute the only difference (which may or may not be the case), then this would be an acquisition in the domestic economy of an overcrowded population. I do not say that it is so, but it certainly is of great physiological interest.

The splenic artery is the chief branch of the cœliac axis; the spleen thus receives a very large portion of arterial blood, which, after traversing the capillaries of the organ, palpably without any deduction, is delivered, together with the residual venous blood of the chylopoietic viscera, into the portal circulation. I have shown that there is no appreciable extravascular parenchyma between the capillaries of the spleen, by which any change is produced in the blood. We know that there is no efferential duct, as in glands; and since the secretion of bile is palpably diminished when the splenic blood is cut off from the portal circulation, no one can venture to doubt that the residuous venous blood of the chylopoietic viscera, from which the bile is secreted by the liver, must require this vital addition. The proper hepatic artery is simply designed for the nutrition of the liver; and these experiments prove that it is not a sufficient vital stimulus for the portal vein, as supposed heretofore, without the aid of the splenic blood. But were this addition of arterial blood (for such the splenic blood is) directed immediately to the venous portal circulation, we should have the unnatural and unprecedented infringement of the laws of general anatomy,—*an arterio-venous anastomosis*. The well known law in physiology is thus additionally established, that no communication occurs between arteries and veins but by the intervention of capillaries; for the spleen simply constitutes this necessary interposition between the splenic artery (which is the largest of the cœliac axis) and the venous portal circulation.

Not a few heretofore unintelligible pathognomonic signs will now suggest themselves to the scientific practitioner of medicine. We can well understand why the pain of deranged liver is so frequently referred solely to the left side. Perhaps in most cases of indurated liver there are piles; but the spleen is frequently congested instead of the hæmorrhoidal veins. I have been often puzzled in my diagnosis to account for the total absence of piles in some cases of congested liver, as well as for the painful sense of weight in the left hypochondrium. I have since found that the one symptom is vicarious of the ther. But there are many other pathological relations, of still greater importance, concerning the states of inanition, and the cachexiæ, but it is not my object to enter upon these subjects here.

Through the ingenious labours of Kiernan the minute anatomical arrangement for the secretion of bile is perfectly understood. But we have now got a cast higher up the stream, for the raw material is more conformable with the general laws of physiology than was supposed. That remarkable opprobrium of the science, concerning the true function of the spleen (and of the placenta also, as I shall show presently,) is removed. But it will be seen that neither the minute nor the general anatomy of those organs could alone supply an explanation of their functions. This has been detected by experiments on living animals, aided by a necessary knowledge of the laws of physiology.

CONCERNING THE PLACENTA.

All observers have remarked the exact similarity of the microscopic texture and arrangement in this organ and the spleen. Indeed, no person can detect any apparent difference between them. I have not been able to see the course and motion of the blood corpuscules in the placenta of any animal, but I can show and prove by injections the following facts:—The maternal left ventricle and proper arteries propel and carry fresh arterial blood to the placenta, and (in cross circulation) the umbilical vein and fœtal auricles receive it; that is, instead of returning by the veins to the mother's heart it goes to that of the fœtus. Then the fœtal heart and arteries return the used blood to the placenta, and the uterine veins receive it again into the maternal circulation. This is matter of positive demonstration. Thus, the maternal and fœtal circulations are aptly represented by the figure of 8; and the placenta, at the intersection of the figure, is merely the necessary capillary communication between the uterine arteries and the umbilical vein, and between the umbilical arteries and the uterine veins. For if there were a direct communication instead of a capillary one betwixt the maternal *arterial* system and the receiving or *venous side* of the fœtal heart, in that respect also there would be afforded an unprecedented instance of arterio-venous anastomosis. How, then, could the addition be effected but in the manner which nature has adopted?

There is another purpose answered by this arrangement; for, were it otherwise, hæmorrhage would always occur when the connection between parent and fœtus was broken off; but the vascular communication being spread over a large portion of the internal surface of the uterus, when that viscus contracts, expelling the fœtus, it at the same time closes its own open vessels, which it could not do if the communication were direct, instead of capillary, between the ute-

rine arteries and the umbilical vein, and between the umbilical arteries and the uterine veins; but the idea of such a connection is an unphysiological absurdity. There can be no such communication; it is contrary to the laws of general anatomy.

If the placenta be an assistant circulatory organ, as the theory of Mr. Jackson supposes, just so also is the whole capillary system of our bodies; but the placenta is simply the absolutely necessary and indispensable interposition of capillaries, to avoid a double arterio-venous anastomosis. This arrangement is in perfect harmony with the natural laws of physiology, for the interposition of the capillaries is the necessary course which nature universally adopts when a communication is required between the arterial and venous circulations.

Some persons have opined that the maternal arterial blood is deposited in cells of the placenta, as a pabulum which is there subjected to some suppositious quasi-glandular action, and then taken up by the capillary radicles of the umbilical vein. If this were the case, according to every natural example, it ought to be taken up by absorbents, properly so called, and not by veins, as every one who understands the arrangement and physiology of the capillaries will readily comprehend; but the microscope shows no cells of the kind. The necessity and the proof of such an arrangement are equally hypothetical; but the notion is altogether disproved by the following fact. So long as the fœtus is a part of the mother's system, no excreting organ of its own is required by it; and, for the same reason, the maternal blood must be sufficient for its development.

I trust that these facts, and the experiments here alluded to, will be considered to be a sufficient demonstration,—

First, that the spleen is merely the necessary interposition of capillaries between the splenic artery (which is the largest branch of the cœliac axis) and the venous portal circulation.

Secondly, that the placenta is simply a double and deciduous body of capillaries, between the uterine arteries and the umbilical vein, and between the umbilical arteries and the uterine veins.

I believe that I am not mistaken in remarking that none of the theories which have hitherto been offered on this subject have made the slightest approximation to the truth, and that the experiments which I have here described point out the true physiology of the spleen now, for the first time.

4, Queen's-place, Kennington,
Nov. 4th, 1842.

ON THE

PHYSIOLOGY AND PATHOLOGY OF THE SALIVA.

By Samuel Wright, M.D. Edin., F.S.A., Physician to the Birmingham General Dispensary, &c. &c.

(Continued from p. 877, Vol. ii., 1841-2.)

ALBUMINOUS SALIVA.

Saliva, in its healthy state, always contains a notable proportion of free albumen, which readily answers to the reagents employed for its detection. This constituent is liable to vary in quantity, but if below .02, or above .5 per cent., the secretion cannot be considered normal.

A disordered action of the salivary glands, *per se*, or a disturbance of their function through a derangement of the system, is often productive of an increase of albumen in the salival fluid. In the former instance the secretion retains its transparency, or as, more frequently happens, is unusually limpid; in the latter it is invariably turbid, and has a dull white appearance.

a. Transparent Albuminous Saliva.—This variety somewhat resembles filtered saliva in its aspect; there are no flocculi or nebulæ in it, unless they be derived from the lining membrane of the mouth; it is almost perfectly transparent, and never, or only in the remotest degree, has a blue tinge. It contains less ptyaline than natural, but its sulphocyanogen is generally increased. It is very tenacious, froths excessively when agitated, and by boiling yields an abundant coagulum. It is strongly alkaline, and of greater specific gravity than natural. It easily decomposes, becoming at first turbid, and then mouldy and ammoniacal.

Albuminous saliva digests and changes starch in a degree inferior to the healthy secretion. It produces the same quantity of gum, but less sugar and lactic acid. This may perhaps be owing to the excess of alkali in the fluid.

This variety of saliva is secreted only when the salivary glands are in a state of unusual excitement; and this excitement is either spontaneous, and apart from any disturbance or disorder of the system at large, or is produced by the action of some local irritants.

The salivary glands rarely, under any circumstances, furnish transparent albuminous saliva for more than six or eight hours; after that period the secretion either degenerates into the opake variety, or recovers its natural character. It is generally more abundant than healthy saliva, but is never discharged profusely.

The secretion of this saliva is commonly preceded by heat, pain, and tumefaction of

the salivary glands; subsequently, they are affected by a pricking or itching sensation, which usually subsides after a few hours. If the inflammation persists longer, it is sometimes relieved by a spontaneous ptyalism, the secretion losing its transparency, and its excess of albumen; at other times the saliva will be diminished, and the local excitement will continue to suppuration.

Revulsives, depletives, and sedative gargarisms, constitute the best treatment when remedies are indicated. But unless the symptoms become aggravated, it is scarcely necessary to interfere, unless to gargarise the mouth with some sedative solution, such as I have already prescribed.

The excitement of the salivary glands upon which the secretion of albuminous saliva depends, is very liable to recurrence. Seldom after the second or third attack is the saliva perfectly transparent; in the subsequent seizures it gradually becomes opake, until at last it degenerates into the "white" variety.

β. Opake Albuminous Saliva: White Saliva.—This saliva differs in many important respects from the natural secretion. In its extreme form it is perfectly opake, and has a milky appearance. Boiling produces an abundant coagulation, and the albumen swims in flakes through the liquid, subsiding finally, and leaving a superstratum which resembles whey. Its specific gravity is greatly above the natural standard; the highest I have met with has been 1.0168, and the lowest 1.0095. It is less tenacious than the transparent variety, though considerably more so than healthy saliva. Ptyaline and sulphocyanogen are generally present in minute quantity, but I have occasionally remarked the absence of the latter. This saliva is always strongly alkaline, and has either a mucous or a mouldy smell. It often contains an adventitious fatty or oily matter. It froths remarkably when agitated, and its bubbles are permanent. It absorbs oxygen very sparingly, and exerts but little action upon starch. After a few hours it becomes flocculent, and shortly decomposes, evolving hydrosulphuret of ammonia. I have met with more than one specimen which has afforded prussic acid during the process of decay.

This saliva is never secreted in profuse quantity, and therefore cannot be easily collected for analysis. I have only been able to examine it sufficiently to determine its amount of albumen, which I find to be very variable. In four specimens it was relatively .62, .96, 1.01, and 1.03, per cent.

The secretion of white saliva is always indicative of a disordered and sluggish state of the salivary glands, either the consequence of previous excitement, or symptomatic of imperfect and impaired digestive function. The accompanying signs are a furred tongue, pale or brownish, and an oily or bitter taste in the mouth.* There is generally thirst, with often a defective or capricious appetite, headach and languor, or stupidity. The eyes are red and watery; urine scanty (though I have once or twice found it remarkably abundant); bowels confined and distended; pulse usually slow and full.

After spontaneous or excited ptyalism the white saliva not uncommonly prevails. In small-pox it is often observable. "Die autem fere undecimo saliva viscidior jam facta, ægerrime excreatur." — Sydenham (Op. Med., Genev. 1736, tom. i., p. 83). I have remarked it in several cases of critical salivation. After the use of mercury I have several times noticed it, but especially after the use of iodine. Indeed, I have often known the latter medicine to diminish and whiten the saliva without having previously augmented it. In one case, in particular, the patient had taken half a drachm of hydriodate of potass daily, for a fortnight, with perceptible benefit. The appetite was good and the secretions natural. One evening, however, a violent diuresis supervened, and continued unabatedly for several days. During this period, and for some time subsequently, the salivary fluid was much diminished, and as white as milk. The digestion also became impaired, and it was not until after a steady and persevering use of tonics and stimulant gargarisms that the function of the salivary glands and of the stomach was restored to health and activity. In this instance the inordinate discharge by the kidneys appears to have been the chief cause of the diminished salivary secretion. Nor is it unfrequently consequent upon the use of strong diuretics. I have also observed the same effect, though in a milder degree, to follow the spontaneous increase of the renal secretion. Hence one reason of the prevalence of white saliva in diabetes. "Saliva alba spumosa." (Commentarius Wenceslai Trnka. De Diabete, 1778, p. 16.) Dr. Good has particularly remarked a "frequent excretion of very white saliva, not inspissated, but yet scarcely fluid." (Study of Med. v. 5, 471.) At the commencement of inflammation of the lungs the saliva is generally white. I have also remarked it in abdominal dropsy, and often in constipation. But it is most frequently met with in disorder of the stomach accompanied with local nervous debility, or with vascular congestion. It is especially common in the glutton and the drunkard.†

* The salivary glands and lining membrane of the mouth have often a congested and livid appearance.

† Falstaff says,

"'——— If it be a hot day and I brandish anything but my bottle, I would I might never *spit white* again.'—2 Henry IV., 1, 2.

"His meaning is, May I never again have wine enough to produce that effect; or,

The secretion of white saliva is sometimes only temporary, and requires us to do nothing more than to gargarise the mouth with cold water, or with some moderately stimulating liquid. At other times it will persist, much to the annoyance of the patient and to the disturbance of his digestion. Under these circumstances it is requisite to employ stronger gargarisms, and to aid their action by local blistering. Frequently the disorder of the stomach and torpidity of the bowels indicate the necessity for mild tonics and aperients. These, however, will not be called for if the saliva be restored to a healthy state and quantity.

BILIOUS SALIVA.

A yellowness of saliva, from the presence of bile, has often been remarked by medical writers. "Subinde etiam colorem (saliva) deponit, et ex albo, fit crocea." Nuck (Sialographia). Riedlinus observes, "Adeo haud raro icterum omne, quod in corpore humano reperitur, serum flavo colore tingere, ut non solum tota cutis eodem infecta conspiciatur, sed et talis e naribus mucus emungatur ipsaque in ore saliva tincta rejiciatur. (Linear. Medic., An. 1697, Feb., Obs. 7, p. 88). It is mentioned by Donatus (Hist. Med. Mirac. lib. 1, c. 9, p. 74); Petermannus (Disp. de Icter. ex Calcul. Vesic. Fell. Lips., 1696, cap. 2, s. 6); and Valcarenghus (Medic. Ration. p. 241). One of the most remarkable cases on record is that related by Dr. Huxham in the "Philosophical Transactions" for 1724, vol. 33:—"The patient was a man aged forty, of a spare, bilious habit, who had an attack of jaundice, followed by a paroxysm of colic, this last being produced by drinking too freely of cyder. Among other medicines was given a bolus, containing a scruple of jalap, eight grains of calomel, and a grain of opium. Copious dejections followed, and a few hours afterwards the patient complained of pain and swelling in the fauces, and spat up a little thick, brown saliva, which was soon considerably increased in quantity, of a deep colour, resembling greenish bile, though somewhat thinner. This flux of green and bilious saliva continued for about forty hours, during which time the quantity discharged amounted to four pints. The colour of the saliva then changed to yellow, like a solution of gamboge, with an increase rather than a diminution of the quantity. It continued of this colour for the space of forty hours more, after which it gradually became pellucid, and the salivation ceased as suddenly as it came on. During the flow of the saliva the teeth and fauces were as green as if they had been stained with verdigris, and the teeth retained the same colour for a fortnight after the ptyalism had ceased. The patient had, a few years before, been suddenly attacked by a spontaneous salivation, so excessive as to endanger his life." (See Good's Study of Medicine, vol. i., p. 76.)

Bilious saliva chiefly occurs in two forms, coloured and colourless;* more rarely it is met with containing only cholesterine.

Coloured bilious saliva is of various shades, from a golden yellow to a deep olive. The lighter specimens are generally alkaline, the darker are not uncommonly acid. The specific gravity of this saliva is greater than natural; its smell is sickly and offensive; its taste bitter and nauseous; it froths easily when agitated, and coagulates abundantly by boiling; protracted ebullition renders it ammoniacal and deepens its hue; it contains only a minute trace of ptyaline, which usually has the colour of the original fluid; sulphocyanogen is generally wanting; it exerts scarcely any action upon starch; it readily becomes putrescent, and then evolves either ammonia or its hydrosulphuret.

A specimen which I once examined afforded the following constituents:—

Water	986.7
Ptyaline	.5
Fatty matter and fatty acid	1.3
Biliary matter	3.2
Cholesterine	.4
Albumen, with soda and albuminate of soda	1.9
Mucus	1.6
Carbonates, Muriates, Phosphates (Potash, Soda, Lime)	2.3
Loss	2.1
	1000.0

In analysing this variety of saliva it is advisable, after having removed the ptyaline and fat by ether, to pass boiling alcohol through the filter until everything soluble in that menstruum has been removed. By carefully evaporating and crystallising, the

* The term, colourless, I employ only relatively, to distinguish the species of saliva which it represents from the opposite, which strongly contrasts with it in a bilious tinge.

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rather, perhaps, may I never have a debauch over night to make me thirsty in the morning.

"Spungius says, in Massinger,

"'——— Had I been a pagan still, I should not have *spit white* for want of drink.'—Virg. Mart. iii. 3.

"That is, for want of more drink to remedy the effect of what he had taken before. It was noticed also as a consequence of habitual intemperance. The unlucky pages in Lyly's Mother Bombie say that their masters had sodden their livers in sack for forty years, and

"'That makes them *spit white* broath as they do.'"—Act iii. scene 1.

See Nare's Glossary.

cholesterine may be separated; and by digesting absolute alcohol upon the residue the biliary matter will be extracted and the chlorides left. The remainder of the analysis may be conducted in the usual manner.

Colourless bilious saliva, as its designation is intended to signify, is free from any appearance of intermixture with biliary matter. Still it is never so transparent as the natural secretion, and has either a dead white or a slightly dingy aspect. It is sometimes bitter, but more frequently imparts a mouldy taste to the tongue. It is always alkaline, with an abundance both of albumen and mucus. Its sulphocyanogen is deficient, though rarely wanting; ptyaline is present in rather less proportion than natural, and its odour is not recognisable in the saliva, whether cold or hot. The addition of nitric or muriatic acid produces, after a few minutes or a few hours, a dull yellow colour, which gradually deepens to a faint olive. Protracted boiling, and spontaneous decomposition, give rise to the same effect in an inferior degree.

This saliva will convert a small quantity of starch into gum, but it never generates any sugar.

That saliva should contain bile without its presence being indicated by its colour, is a curious fact, though by no means an uncommon one; for my own observations have led me to the conclusion that the latter variety of saliva is much oftener to be met with than the former. It is not easy to account satisfactorily for the difference, but perhaps the theory will not be far from the truth if we suggest that in one example the bile is simply *intermixed* with the saliva, and in the other is in intimate *combination* with it.

Saliva which contains cholesterine, free from intermixture with biliary matter, is of rare occurrence. I have seen it only twice—in one instance accompanying dyspepsia with hepatic derangement, and in the other succeeding to an attack of jaundice. In the former case it lasted for three or four days; in the latter, for about a day and a half. The quantity secreted was scarcely more than ordinary, but my attention was directed to it from the patients complaining of a greasy taste in the mouth.

This saliva is white and shining, and more dense than ordinary; it has an alkaline reaction, does not redden a persalt of iron, and is nearly odourless. Its albumen is in excess, but its saline constituents are in small proportion; it possesses feeble digestive properties, and is slow of decomposition.

A discharge of bilious saliva, whether coloured or colourless, either accompanies, precedes, or prevents an attack of jaundice. The former variety usually attends the jaundiced state, the latter more commonly foreruns it. The one, consequently, either removes or mitigates, the other either averts or restrains the disease.

As before remarked, coloured bilious saliva is much the less common of the two. It is generally vicarious of an imperfect action of the kidneys, bowels, or skin; its quantity is always abundant, and though it sometimes alternates with that of the other secretions, it rarely permanently diminishes until the patient is free from the jaundiced tinge. The salivary glands are usually tinged, and of a dull red colour, but they are not painful, and they present no signs of active inflammation.

Case 1.—Mary S., ætat. 28, a washerwoman, was under my care in Edinburgh, in 1839, for an attack of idiopathic jaundice. During the space of a week she was treated with alkalies, salines, mercurials in alterative doses, and aperients, but with little or no benefit. The yellowness of the skin continued, the urine was loaded with bile, and the fæces were like pipe-clay. On the morning of the eighth day she complained of stiffness and aching of her jaws, and of heat in the neighbourhood of the parotid and submaxillary glands, which were considerably swollen. In the afternoon the salivary secretion was much augmented, and it was stated to be excessively bitter. After having swallowed it for some time, she became nauseated, and at last vomited severely. Subsequently the ptyalism increased, and she spat for three or four days two quarts daily of saliva, deeply tinged with bile. It was intensely bitter, and always excited nausea or vomiting if swallowed. During the continuance of the salivation the fæces remained clay-coloured, and the urine became more clear, yet the conjunctivæ and skin gradually lost their yellowness, and the patient's health was considerably improved. On the thirteenth day the saliva recovered its usual colour, and was scarcely more abundant than common; at this time an active diarrhœa supervened, and the fæces were again natural. On the cessation of the purging the patient was convalescent.

Case 2.—Thomas H., ætat. 36, a gardener, living in a small village in the county of Nottingham, consulted me in March, 1841, for an attack of jaundice under which he had been suffering for nearly three weeks. I treated him for several days upon a tonic-aperient and alterative plan, comprising chiefly rhubarb, taraxacum, mercurials, and preparations of iodine, but without benefit. In the afternoon of the sixth day he complained of a bitter taste in his mouth, with aching of the jaws, and a sense of weight in the pharynx. His mouth was unusually moist, and he was incessantly gaping. In the evening of this day he became the subject of profuse ptyalism; the saliva was of a dull yellow colour, and intensely bitter. There was no mercurial fœtor of the breath, the gums were not spongy, nor was the membrane of the mouth abraded. From the date

of the salivation his health began to improve, and the tinge of his skin sensibly declined. The discharge persisted for three days (during which time the urinary and fæcal evacuations were scanty and depraved), when suddenly the salivary glands became almost inactive, and in a few hours the patient was as yellow as ever. I was unable to see him until the following day, at which time a violent diarrhœa had supervened and was freely unloading the system of its accumulated bile. The patient's strength enabled him to bear this evacuation, which was consequently not interfered with. It continued, gradually decreasing, for a few days, and finally left its subject free from ailment. The saliva was not afterwards bilious, and was secreted in natural quantity.

Case 3.—Susan T., ætat. 25, was under my care in August, 1841, for an attack of jaundice. At the time I first saw her she had been ill for three days; her skin was deeply yellow; urine scanty and very dark; bowels costive; fæces clay-coloured. She was treated with salines and aperients for nearly a week, but with little manifest improvement. She constantly suffered from a bitter taste in her mouth, and her salivary secretion was rather augmented. On the fourth day these symptoms were more marked, and they gradually increased until the ninth day, when an active ptyalism commenced. The saliva, of which she spat nearly a quart daily, was deeply bilious, nauseous, and bitter. After the occurrence of the salivation she complained less of general uneasiness, and her complexion greatly improved, although the renal and intestinal evacuations continued unchanged. The salivary discharge was constant for nearly five days, at the end of which time the yellowness of the skin was barely perceptible, and the patient's health was much better. Unfortunately, in walking to a friend's house she was drenched in a shower, and omitted afterwards to change her clothes. She complained in the evening of chilliness, and especially of cold and numbness of her feet. I saw her the next morning, when she was suffering from pyrexia, with a complete cessation of the ptyalism. In the afternoon of this day her jaundiced aspect had entirely returned. I ordered venesection, with salines, antimonials, and mercurials. On the following day the febrile symptoms were much abated, but the skin was becoming darker; the urine was scanty, turbid, and foul; fæces loaded with mucus, but totally wanting in bile. The salivary secretion was still very sparing, but the patient did not complain of a bitter taste. The antiphlogistic treatment was ordered to be continued, and, additionally, the capsicum gargarism was directed to be used every three hours. After a few trials the salivary glands became more active, and the ptyalism was in a short time restored, but the saliva contained no bile. In eighteen hours, however, it became thoroughly bilious, and the patient again began to improve. The gargarism was used during the next four days, to the effectual relief of the system. The bowels were also stimulated by suitable aperients, and subsequently the bile was discharged by its accustomed channel. The saliva, on the arrest of the stimulation, became natural, and the patient was speedily restored to health and energy.

As we have before said, in treating of the physiology of saliva, this fluid is to be regarded as a pure secretion, provided for the purpose of variously aiding the digestive function. Its increased discharge is injurious to the system only from the debility which it induces, and its presence in the stomach in undue quantity is hurtful merely from the local irritation which it excites. This is a simple estimate of its *ordinary* and *extraordinary* physiological servitude. In a pathological sense, however, it is capable of becoming disordered, *per se*, to an extent sufficient to render it not only useless, but pernicious to the stomach; it may then be fairly regarded as an excretion; and, again, it may be healthy in the number and proportion of its constituents, but depraved from the presence of some foreign material which is being removed from the system by the salivary channel. In the former case the salival glands are the *actire*, in the latter, the *passive*, adulterators of their secretion.

In diseases which, like jaundice, involve a corruption of the blood from retention or resorption of effete matter, this is generally eliminated by some of the emunctories—the kidneys, bowels, or skin. In this manner the system is lightened of its burthen by vicarious actions which are comparatively harmless. Sometimes, however, the excretory organs intermit or suspend their vicarious function, and the blood becomes oppressed and its action paralysed by the accumulated morbific matter, and death is the speedy consequence. Under other circumstances, as we have seen in the cases just recorded, the office of an *excernent* organ becomes delegated to a *secernent* one, and the system is relieved at the expense of a secretion whose services are requisite for healthy digestion and assimilation. If this action were persistent instead of temporary, gradual wasting and death would follow; but when limited in its duration, it is one of those expediencies of nature which can be borne with impunity; and though, as in the cases under our notice, the stomach may be disordered through a want of its accustomed proportion of healthy saliva, and the constitution may be debilitated from imperfect nutrition, these are evils which admit of an ultimate remedy, and bear on comparison with that train of mischief which follows a continued corruption of the vital fluid. Hence, when the blood is loaded with bile, perhaps rapidly accumu-

lating, and it fails to be discharged by the kidneys, bowels, or skin, we may regard it as a very fortunate event if the morbific matter obtain an exit by the salivary glands, until its elimination can be secured by other and more appropriate organs.

In cases of bilious salivation, we should especially guard against any sudden check to the discharge, which ought rather to be encouraged, whilst, at the same time, we use persevering but gentle means to invite the excretory apparatus to its accustomed duty. Neither powerful diuretics nor purgatives should be employed, but the kidneys and bowels should be gently stimulated by salines and aperients, with an occasional mercurial, and the skin should be excited by friction and the use of the warm bath. By these means, and by a careful precaution against cold, a healthy function will probably soon be restored, and most likely it will be permanent. If, however, we irritate the kidneys by violent diuretics, or the bowels by active cathartics, we shall incur the risk of suspending the critical salivation, and, perhaps, at the same time, fail to relieve the system by the other evacuations. I have seen a brisk purgative check the secretion of bilious saliva without obtaining a discharge of bile through the intestines. Should a *casual* diarrhœa or diuresis, not bilious, supervene upon the ptyalism, it must be moderately suppressed by astringents, sedatives, and the warm bath; but if the diarrhœa or diuresis be *critical*, and sufficiently bilious, it may be either let alone, or indirectly assisted by whatever means are calculated to promote it.

If the ptyalism should cease spontaneously, as is sometimes the case, the emunctories still failing to carry off the accumulated bile, we must use every effort to restore the activity of the salivary glands. The mouth is to be gargarised with stimulant solutions, aided by the steam of hot water, or chlorine water, and, if necessary, local blistering should be employed. These means will be found much more efficacious than mercury, which occasionally fails to restore a critical salivation under such circumstances; and even when successful its effects are generally slow, and often an impediment to perfect recovery.

Colourless bilious saliva occurs, for the most part, in those cachectic states of the system which, in adults, are the consequence of irregularity and excess; and which, in elderly people, are connected with a change of life, or with a breaking-up of the constitution. In such cases, the function of the liver is imperfectly performed,—sometimes owing to a sluggishness of the organ, but oftener to a permanent change of its structure. Not only the *quantity* but the *quality* of the bile is unnatural; it tinges the system, and taints most of its secretions. It imparts various shades of red, yellow, and green, to the urine, fæces, and sweat, but its presence is scarcely indicated in the saliva, excepting by the addition of an acid, by long boiling, or by decomposition. This appears to be owing to some modification which the bile undergoes in its passage through the salivary glands. In the present example, the bile does not, as in the previous variety, simply *escape* with the saliva; but being small in quantity, and slow in its separation from the blood, it becomes to a certain extent subject to the laws which contribute to the formation and preservation of the salival fluid; and even after the secretion of the saliva, and its discharge from the mouth, the forces, chemical, physical, and vital, with which it was endowed in the process of its generation, continue to act until the proportion and harmony of its constituents have been destroyed, either by spontaneous decomposition or by artificial agency. There is, perhaps, not any animal secretion more uniform and complete in its nature and composition than healthy saliva. In the nice ratio of its constituents, and in its properties, physical, chemical, and physiological, we have an evidence that the secernent function which produces it is one of the most perfect processes in the economy of life. The balance having been broken, one constituent having become independent of another, and subject to laws purely chemical, restraint is no longer exercised upon any adventitious matter, and, of course, its presence and power become immediately apparent.

Colourless bilious saliva is never secreted in excess; directly that its quantity amounts to salivation, it merges into the coloured variety. The proportion of bile is then increased, and the distinctive characters of saliva are lost. This variety of the salivary fluid often exists for a long time without affecting the patient further than by imparting a yellowness to his teeth and tongue, and a sense of bitterness or mouldiness to his taste. In some people it colours the teeth permanently yellow, green, brown, or black, according to the amount of bile present, and its facility of decomposition. In others it discolours the tartar of the teeth in the same manner. It is rather negatively than positively injurious to digestion. As before said, it will convert starch into gum, but not into sugar. It is usually accompanied with symptoms of dyspepsia; a furred yellow tongue, red at the tip and underneath; congestion of the lining membrane of the mouth; pain in the stomach after eating; acid eructations, and sometimes vomiting of yellowish or greenish matter; pain in the right side and under the right shoulder; headach or dizziness; dimness of vision and singing in the ears; constipation; variableness of temper and appetite, &c.

With some people this condition of the saliva will persist for weeks and months with little variation; in others it will vary

according to the state of the excretions; if purging, diuresis, or diaphoresis occur, and the matter discharged be abundant in bile, the saliva may become healthy in a few hours, and, perhaps, continue so; but it often degenerates again after a day or two. Still, it rarely happens that an increased discharge by any of the emunctories supervenes without the saliva being temporarily or permanently restored to a natural state. In old cachectic people it is often very continuous or recurrent; in adults it is generally consequent upon excesses, may subside spontaneously, is easily remedied, and not liable to a return, except through the means which originally produced it.

Whenever colourless bilious saliva is secreted a disturbance in the action of the liver and a disorder of the system may always be suspected. A continuance of the secretion often prevents jaundice, and frees the system from the incumbrance of bile, until its functions have again recovered their healthy tone and balance. However, in spite of the discharge of bile by the saliva, jaundice will occasionally follow, sometimes running a protracted or a fatal course, and at others being cut short by a critical discharge of coloured bilious saliva, or by active diuresis or purging.

The existence of colourless bilious saliva is determined by the symptoms which I have already detailed, and by a discolouration of the secretion on the addition of nitric or muriatic acid. The treatment should consist in the exhibition of such remedies as are calculated to restore a healthy activity to the liver, stomach, kidneys, and skin. If practicable, the patient ought to have horse exercise daily, and take a hot bath twice a week, using the flesh-brush vigorously after each immersion. Gentle mercurials with aloetic purgatives should be administered every night; and tonics of calumba, quassia, rhubarb, or taraxacum, with alkalies, twice or thrice a-day. After having corrected the state of the stomach, and obtained a good action by the kidneys and bowels, the salivary glands should be gently excited by a stimulant gargarism, to remove their congestion and torpidity, and so to restore to them a more energetic and healthy function.

(*To be continued.*)

Baglivi used to employ a singular metaphor to convey his notions of the *vis medicatrix naturæ*. He likened the animal frame in disease to a man having fallen into a well, to aid whom everything that comes to hand is thrown in; and after a multitude of useless matters he often chances to find some one of these serviceable in helping him to get out. Nature acts in a similar manner against diseases, being ready to derive benefit from the first remedy the effects of which tend toward recovery.

ILLUSTRATIONS OF CARDIAC DISEASE,

DESIGNED TO SHOW THE

PHYSICAL SIGNS AND POST-MORTEM APPEARANCES

OF THAT CLASS OF MALADIES; AND THE CONNECTION EXISTING BETWEEN THE MORBID CONDITIONS OF THE HEART AND OTHER ORGANS AND TISSUES OF THE BODY.

By R. H. Semple, Esq., Surgeon, Islington.

I.—*Disease of the Aortic Valves.*

Mary Ann Lawson, ætat. 35, has been married eleven years, and has had five children; she menstruated six weeks before the present report. On the 5th of November, 1841 she had a fright, from meeting a drove of bullocks, which circumstance caused a miscarriage the same day, the fœtus being in the fifth month of gestation. Before this occurrence she had never suffered a day's illness, excepting in her confinements, from all of which she recovered rapidly. But a week after the abortion she was attacked with pains in her limbs, especially in the left arm and hand. She took medicines and applied blisters, but was not bled. Under this treatment the pains in the limbs were relieved, but she was then seized with palpitations of the heart, which have continued ever since, together with violent pain, which comes on suddenly, and lasts from an hour to an hour and a half. She went into St. Bartholomew's Hospital, under the care of Dr. Roupell, but did not derive much benefit from the medicines prescribed. She was at last admitted into the Islington Infirmary, on the 30th of March, 1842, presenting the following symptoms:—She is pale and exsanguine, and her lips are of a bluish colour; she is very thin, and her face presents an appearance of great anxiety. She sits up in bed, not being able to lie down with comfort; and in respiration the muscles of the neck are in constant and rather violent action. Her sleep is much disturbed, and she is often awakened by violent attacks of dyspnœa and spasm. Appetite bad; not much thirst; bowels generally confined; tongue clean; passes her water freely, and in the usual quantity; the urine is generally turbid. Never had swelling in the legs, nor did she ever spit blood. Pulse feeble, but regular.

Auscultation.—Sounds of the heart heard over a much greater extent than is natural, being heard distinctly over the right nipple; but the impulse is not at all increased. There is a loud murmur, of a sharp sawing character, heard with both sounds of the heart. These murmurs are heard at the apex of the heart, but become much more loud, in proceeding with the stethoscope upwards, towards the base; they are also distinctly heard in both carotids. There is no swelling

of the jugular veins. There is no morbid sound in the lungs.—℞ *Tincture of opium, tincture of digitalis,* of each five minims; *mint-water,* one ounce. The draught to be taken every four hours.

She experienced great relief from this medicine, which was continued for some days. The pain and spasm of the heart were much diminished, and she was able to sit up for several hours every day.

April 18. Complains of great dyspnœa, with cough, and copious frothy expectoration. Mucous and sonorous rhonchi heard in various parts of the chest. She was ordered the following:—℞ *Tincture of squills, ipecacuan wine,* of each twenty minims; *Epsom salts,* half a drachm; *infusion of senna,* half an ounce. The draught to be taken every four hours.

By the use of this medicine the bronchitis was removed, and at her own request the former medicine was again ordered, and afforded considerable relief. Her health became so much improved that she was on the point of leaving the infirmary and going home, but she was persuaded by her friends to remain, and she continued in the same state as that above described until the evening of May 12, when she was seized with faintness and cold sweats; she did not sleep till four o'clock the next morning, when she dozed a little. She has passed a little water, which is thick and turbid. She complains of cough and difficulty of breathing; her face has the appearance of great anxiety and suffering; when she lies down her throat becomes obstructed by mucus; she has spit some small clots of blood, of a dark colour, and mixed with frothy mucus. The hands, ankles, and feet, are now œdematous. Pulse 92; tongue clean; bowels rather relaxed. She asked for some wine, which was allowed her.

May 13. She is evidently sinking. She died on the same day.

Post-mortem Examination, Thirty-six Hours after Death.

The body was emaciated; the feet, legs, and hands œdematous; the lips livid.

Head.—The scalp, skull, and dura mater were healthy. The arachnoid membrane was congested; its veins and arteries were distended with blood. The membrane itself was not thickened, nor was there more than about a fluid drachm of serum effused beneath it. The ventricles contained only a small quantity of thin transparent serum. On slicing the brain, some red spots were observed, which were probably owing to the congestion of the minute vessels. In other respects the brain was perfectly healthy; and even the congestions above described were obviously due to the diseased condition of the heart.

Chest.—There was a considerable quantity of serous fluid, amounting to about a quart, in the thoracic cavity; this fluid was apparently effused a short time before death, and was not poured out in consequence of disease of the pleura, which was quite healthy. The upper lobes of both lungs were slightly emphysematous at the edges; the inferior lobes were greatly congested, and in some parts solidified. The bronchial tubes contained some frothy mucus, but in other respects presented a healthy appearance. The heart, externally, appeared larger than usual. The pericardium contained about three ounces of serous fluid. The serous membrane covering the heart was injected, and anteriorly exhibited a patch of coagulated lymph of about the size of a half-crown. The coronary veins were greatly distended with blood. The apex of the heart extended as far as the lower margin of the seventh rib. The heart and aorta were now removed for farther examination. The heart appeared to be about twice the natural size, but this increase of bulk was found to be chiefly owing to the enlargement of the cavities, which were filled with coagulated blood; the right auricle and ventricle were of a healthy appearance; the left auricle appeared also healthy, but the left ventricle was very much dilated, although its walls were not thicker than in the natural state, constituting a case of dilatation with hypertrophy in which the parietes preserve their natural thickness, yet as the whole bulk of the organ is increased, it is said to be hypertrophied. As the thickening was not remarkable, the absence of increased impulse during life is readily accounted for. The mitral valves were healthy, and allowed two fingers to pass; the aortic valves, however, as was anticipated, were diseased, and one finger could scarcely be introduced from the left ventricle into the aorta. Two of the valves were thickened and cartilaginous; one of them was also connected by a strong adhesion to the lining membrane of the aorta; the other valve was healthy. The aorta above the valves was greatly dilated as far as the origin of the brachio-cephalic and left carotid and subclavian arteries. The lining membrane of the aorta was thickened, and could be torn off by the forceps, in long shreds. Beneath the lining membrane there was a great number of atheromatous and albuminous deposits, and the middle coat of the artery was thickened and cartilaginous. The rest of the aorta, although exhibiting here and there some of the same appearances as were seen in its ascending portion, was not much diseased. This condition of the valves and aorta was clearly traceable to inflammation of the pericardium and endocardium.

Abdomen.—The cavity of the abdomen contained some serous fluid; the liver was dense in its structure and mottled in appearance; on cutting it, the mottled appearance was very remarkable; the minute lobules were of a

pale colour, with the exception of a central speck in each, denoting the entrance of the minute termination of the hepatic artery, while the interlobular spaces were of a very dark colour, owing, as I conceive, to congestion of the terminations of the vena portæ. The internal surface of the stomach presented a dark-red colour, owing to congestion, and the same appearance was observed in the intestines; the mesenteric glands were enlarged; the other viscera, with the exception of appearances denoting congestion, were generally healthy.

In this very interesting case the diagnosis made during life exactly corresponded with the post-mortem appearances. The sounds of the heart, heard over a great extent, indicated dilatation, but as the impulse was not increased the hypertrophy was only proportional to the enlargement of the cavities. The sawing murmur indicated valvular disease, and as that sound was loudest at the base of the heart, the aortic valves were fixed upon as the seat of the mischief.

II.—*Hypertrophy, with Disease of Aortic Valves.*

Benjamin E., ætat. 54, applied to me on the 24th of August, 1842. He is a coal-heaver, a stout, muscular man, formerly much addicted to drinking intoxicating liquors of various kinds, especially porter, but now a member of a temperance society. He has generally enjoyed good health, with the exception of some slight attacks of rheumatism. About a month ago he began to feel some uneasiness in the chest, with difficulty of breathing and palpitation of the heart. These symptoms became worse every day, and at last compelled him to leave off work and seek medical advice. He at present complains of great difficulty of breathing, cough, and inability to lie in the recumbent posture; the face is flushed, from congestion of the superficial vessels; the breathing is embarrassed and hurried, muscles of the neck being called into powerful action at each inspiration; there is œdema of the ankles, which pit upon pressure; bowels open; urine of a natural appearance; cough, accompanied by a scanty, thick expectoration; pulse 100, weak and irregular.

Physical Signs.—Percussion over the chest gives a good sound, and the precordial dulness is not very extensive; the action of the heart can be felt by the hand, but it is not so strong as to raise the stethoscope; the respiratory murmur is heard tolerably well over the chest, but in some places it is obscured, probably by congestion of the lungs. Action of the heart very powerful in the lower half of the sternum, extended over a large space, being felt nearly as far as the right nipple, but unaccompanied by any murmur, even the natural sounds being very obscure; the upper half of the sternum gives a bellows-murmur with both sounds of the heart, very distinct but not very loud. The diagnosis, is hypertrophy of the heart, especially the left ventricle, with dilatation, and disease of the aortic valves. Prognosis unfavourable ultimately, though there does not at present seem to be so much obstruction to the course of the blood through the heart as to threaten immediate danger.

In order to relieve the congestion of the lungs, he was ordered to take the following:—℞ *Ipecacuan*, fifteen grains. To be taken immediately.—℞ *Ipecacuan wine, tincture of squills*, of each twenty minims; *sulphate of magnesia*, half a drachm; *infusion of senna*, one ounce. The draught to be taken every four hours.

Aug. 25. Much better; dyspnœa much relieved by the emetic, which has acted powerfully. To continue the draughts.

Under this treatment the congestion of the lungs was very considerably relieved, but as the palpitation of the heart still continued, he was ordered to take the following on the 29th of August:—℞ *Tincture of foxglove*, ten minims; *ipecacuan wine*, twenty minims, *Epsom salts*, half a drachm; *infusion of senna*, one ounce. The draught to be taken every four hours.

The use of the tincture of foxglove was followed by a decided improvement in the symptoms; the palpitation of the heart was diminished, the orthopnœa disappeared, and the patient slept well at night; the swelling of the legs subsided, and the pulse became regular. After continuing the use of this mixture until September 7th, he became affected with headach and giddiness, for which reason the digitalis was omitted until the 10th of September, when it was again prescribed with the same advantage as before, and continued until the 26th of September, when he was so much better, in nearly all respects, that the digitalis was again omitted, and the following draught ordered:—℞ *Tincture of hyoscyamus*, twenty minims; *sulphate of magnesia*, half a drachm; *infusion of senna*, one ounce. The draught to be taken every four hours.

This man was so much relieved that he returned to his work, the rational symptoms being all alleviated, though the physical signs of diseased heart still remained. He will probably apply again for relief during the winter, especially as he is a man of intemperate habits, and his occupation is one requiring great muscular exertion, and one which exposes him to the vicissitudes of the weather. This case illustrates very remarkably the beneficial effect of digitalis in disease of the heart.

III.—*Hypertrophy with Dilatation.*

William Bolton, ætat. 77, an inmate of the Islington workhouse, has experienced frequent attacks of illness; on two occasions

he presented symptoms which seemed to threaten an apoplectic seizure, but these were removed by putting him on low diet, by cupping on the nape of the neck, and the administration of laxative medicines. He has also suffered occasionally from attacks of rheumatism and chronic bronchitis, for which the appropriate medicines were prescribed. In the spring of the present year he was seized one day, while at work, with shortness of breath, and cough, with copious expectoration. He afterwards perceived that his legs began to swell, and he was admitted into the infirmary on the 27th of May, 1842. At that time his symptoms were the following:—

He complains of pain in the head, with difficulty of breathing, which prevents him from sleeping; cough and expectoration; the dyspnœa is increased by the slightest exertion, and he cannot lie in the recumbent posture; the legs and ankles are œdematous; urine copious and clear; bowels open; tongue clean; pulse 68, irregular, some of the beats being strong, others weak, and the intervals following no definite order; sputa frothy and bloody.

Physical Signs.—Percussion gives a tolerably good sound over the whole of the chest, though it is obscured by the congested state of the lungs; sibilant, sonorous, and mucous rhonchi are heard all over the chest; the action of the heart is stronger than natural, felt over a large space; sounds of the heart obscure; no bellows-murmur. The diagnosis is chronic bronchitis, with hypertrophy and dilatation of the heart; no valvular disease. He was ordered to take the following:—℞ *Jalap powder, cream of tartar*, of each one scruple. To be taken immediately. —℞ *Ipecacuan wine, tincture of squills*, of each twenty minims; *Epsom salts*, half a drachm; *infusion of senna*, one ounce. The draught to be taken every four hours.

He derived considerable benefit from this medicine, which he took for some time, and became so much better that he left the infirmary at his own desire on the 27th of June. He soon returned, however, with symptoms similar to those already described, and was subjected to the same treatment until the 20th of August, when he again left the infirmary relieved. He continued to take medicine occasionally until October 14th, when he was again admitted into the infirmary with an aggravation of all his symptoms. He was ordered to take the ipecacuan wine, in conjunction with tincture of henbane and saline purgatives, but he gradually sank, and died on the 6th of November.

Post-mortem Examination, Thirty-eight Hours after Death.

The body was that of a well-formed, muscular man; the ankles œdematous, the face, head, and neck livid. On removing the scalp a large quantity of fluid blood gushed out from the sagittal suture, to the amount of a pint or more; the skull was unusually thick, and the depressions for the ramification of the meningeal arteries very deep; the dura mater was greatly congested, but its sinuses were not much distended with blood, —the congestion seemed chiefly confined to the small vessels; the arachnoid membrane was opake and thickened, and a large quantity of thin serous fluid was effused beneath it. The substance of the brain was exceedingly firm, and the colour, both of the cortical and medullary portions, quite natural. The ventricles contained one or two drachms of thin serous fluid; the choroid plexus presented a dropsical appearance, owing to serous effusion within the pia mater. On removing the brain a large quantity of fluid blood was poured out from the vessels of the vertebral canal into the skull.

Chest.—On removing the sternum the heart was seen occupying an unusually large portion of the thoracic cavity; there was an enormous effusion of serous fluid in the right side of the chest, compressing the right lung; there was also some effusion on the left side, but the lung on this side was generally adherent to the parietes of the chest by old and strong fibrous bands. Both lungs presented a dark and congested appearance; the bronchial tubes were thickened and cartilaginous; their internal surface was highly inflamed, and they were filled with tough, tenacious mucus. The pericardium contained a little serous fluid. The heart was enormously enlarged, being upwards of twice its natural size; all its cavities were filled with blood, partly fluid, partly coagulated, which also occupied the pulmonary artery and the aorta. The right auricle and ventricle were much dilated, but their parietes were not thicker than usual; the left ventricle was dilated, and the parietes considerably thickened. The whole of the valves were carefully examined, but they exhibited no remarkable appearances, with the exception of a very slight thickening of the aortic valves. The liver was small, and did not extend below the margin of the ribs; its surface was uneven, and minutely lobulated; and, on examining its internal structure, it was found that the interlobular vessels were congested, while the lobules themselves were of a pale colour and shrunken, thus exhibiting the incipient stage of the disease called cirrhosis. The kidneys, externally, presented a somewhat lobulated structure, and their pelves were loaded with fat. There was some serous effusion into the abdominal cavity, but the quantity was not great. The other viscera of the abdomen presented no morbid appearance.

The case of this man, who had been an invalid at intervals for several years, and died at the age of seventy-eight, shows that disease of the heart may continue for a considerable time, without leading to fatal consequences, provided there be no valvular dis-

ease: the diagnosis, therefore, is of considerable importance. It must not be forgotten, however, that although persons labouring under disease of the heart similar to that described in the present case, may linger for years, and finally die a natural death, they are liable to be cut off suddenly in the midst of their career. Why this should happen where no visible obstruction to the course of the blood can be traced, it is not easy to determine; and the only means of solving the problem seems to be, to refer the sudden decease in such cases to a spasmodic contraction of the muscular fibres of the heart, causing a sudden cessation of its action.

IV.—*Hypertrophy, with Disease of Mitral Valves.*

Caroline S., ætat. 22, a servant, was seized about six years ago, with an attack of acute rheumatism, which continued for nearly eight months, and for which I attended her. She was then bled, and when the pericardium became inflamed she was cupped over the region of the heart. She also took mercury to salivation, together with colchicum and saline aperients. She recovered from this attack, and the only bad effect which resulted was occasional palpitation of the heart, which, however, was not of a violent character, and did not cause much uneasiness. She went into service, and enjoyed tolerably good health until the end of June in the present year, when, in consequence of being obliged to carry a heavy child for her mistress, she was again seized with palpitation of the heart and difficulty of breathing, which gradually increased, and induced her to seek medical advice. After taking some medicine without relief, she was admitted into the Islington infirmary on the 6th of October, 1842, when she presented the following symptoms:—She is pale and emaciated, and the feet, ankles, and legs are anasarcous; the lips are red, but the cheeks are pale and bloodless; the muscles of the neck are called into action at each inspiration. She complains of great difficulty of breathing, and pain in her left side, with violent palpitation of the heart; also of cough, attended with frothy expectoration, but she does not and never has spat blood. She sleeps pretty well at night, but the horizontal posture increases the cough and dyspnœa, and obliges her to sit up in bed; urine scanty; bowels open; pulse very feeble and exceedingly irregular, about 96.

Physical Signs.—The jugular veins are swelled; the action of the heart may be plainly seen elevating the parietes of the chest, and on applying the hand, the powerful action of the organ is clearly felt, communicating a strong impulse. Percussion gives a good sound beneath the clavicles, but the precordial dulness is very extensive, being traced far over to the right side.

Auscultation.—The respiration tolerably healthy; action of the heart so strong as to lift up the stethoscope; the impulse felt over a very extended space,—indeed, it is felt, in a greater or lesser degree, over the whole of the chest; the sounds of the heart are accompanied by a loud murmur, between a bellows and a rasp-sound, which is so prolonged with the first sound as almost to conceal the second. The murmur is heard over the lower half of the sternum, being most distinct towards the apex of the heart; there is no murmur in the neck. The diagnosis in this case is, hypertrophy, with dilatation of the heart, and disease of the mitral valves; the prognosis is unfavourable. She was ordered to be kept perfectly quiet, and her diet was directed to consist chiefly of milk and light broths. She was ordered the following:—℞ *Tincture of digitalis, tincture of opium*, of each five minims; *sulphate of magnesia*, one scruple; *infusion of senna*, one ounce. The draught to be taken every four hours.

She appeared to derive some benefit from this treatment, though no permanent relief could be expected. She continued to grow weaker and weaker; the anasarcous condition of the body gradually increased, the abdomen becoming distended with fluid, as well as the face and eyelids. In the beginning of December she began to spit a large quantity of thick, tenacious, rusty-coloured matter, and to complain of increased pain and shortness of breath. I was thus led to suspect the existence of pneumonia, and my suspicions were confirmed on hearing a loud crepitant rhonchus along the whole of the right side of the chest, posteriorly. The coexistence of pneumonia with disease of the mitral valves has frequently been observed, and in my last paper upon this subject I adduced some cases in illustration of the fact. In the present instance the debilitated state of the patient did not allow of any active treatment, and she was therefore ordered only to take occasional small doses of opium, with mild expectorants. She gradually sank and died on the 6th of December.

I regret to say that no post-mortem examination was allowed.

Islington, Dec. 12, 1842.

Diabetic Sugar.—Dr. Nasse, of Bonn, records an instance in which the sweat of a diabetic patient, treated with alcohol, and the solution afterwards heated to the evaporation of the watery particles, yielded a viscous and saccharine residue. Sugar was found in the saliva also, which, on being treated with yeast, underwent vinous fermentation. The presence of sugar in the perspiration, &c., of diabetic persons is, however, not constant, as proved by our countryman, M'Gregor. Lehmann, also, was unable to detect it in the saliva of more than one in three persons affected with the disease.—*Schmidt, Jahrb.*, No. 9.

PERFORATION OF THE STOMACH.

To the Editor of THE LANCET.

SIR,—Should the following case, which came under my observation a short time since, appear to you of sufficient interest, you will oblige me by inserting it. Your very obedient servant,

STEPHEN BOWDEN.

25, King's-square, Dec. 29, 1842.

E. D., ætat. 17, a young woman, in service, short in stature, with a waxy and exsanguine, though not emaciated appearance. Her health had always been delicate; menstrual functions irregularly performed; palpitations and fatigue after little exertion. Her appetite for some time past had been inordinately large, and she has been subject to violent attacks of pain in the stomach. At ten o'clock on the morning of Thursday, Nov. 10, after having gone through some of the usual business of the day, she was seized, while cleaning a grate, with a sudden and most excruciating pain, which she referred to the left hypochondriac and epigastric regions. This was accompanied by violent vomiting, which lasted for some time, with little intermission. She was removed in a cab to her mother's house, a distance of about half a mile. No evacuation of the bowels having taken place, her mother procured from a druggist-surgeon in the neighbourhood some castor oil; afterwards a black draught was administered, but both proved inefficient, being probably rejected by the vomiting, which continued, though with diminished urgency, the whole of the day. In the middle of the Friday night she expressed herself free from pain, and became tranquil; this was succeeded by a comatose state, which, after two hours' duration, terminated in death, at half-past five, a.m., on Friday, not quite twenty hours from the commencement of the attack. The pain seemed gradually to decrease from its first invasion, and the girl felt and declared that her complaint would terminate fatally.

Autopsy, Twelve Hours after Death.—On opening the abdomen a quantity of a yellow opake serous fluid gushed out on each stroke of the knife, with which were mixed largish flakes of coagulated lymph; the fluid effused would have measured at least two quarts. The layer of peritoneum covering the abdominal parietes was in a few places slightly roughened, and interspersed with vascular patches of a bright arterial-red colour, irregular in shape, and distributed chiefly to the lower part of the abdomen; the corresponding surface of the intestines was also roughened, and their small superficial vessels injected. There were old adhesions between the under surface of the diaphragm and liver, and apparently stronger connections than usual between the liver and stomach,—that and the transverse colon, and spleen. The small intestines had lymph effused in such a manner around and between them as to convey the notion that an early stage of organisation had already begun; on separating one portion of gut from another these connections would be torn through, presenting much the appearance, and somewhat the resistance that half-dried parts would do under like circumstances. In other respects these viscera seemed perfectly healthy, as far at least as could be seen by an external examination. On the anterior part of the stomach, about an inch below and to the right side of its junction with the œsophagus, was found a circular perforation, about the sixth of an inch in diameter, perfectly regular in shape, and well defined as to its edges, as seen externally; internally, the several coats of the stomach, for about an inch around the opening, were much thickened, and obliquely bevelled off at the margin, one resting on, and not projecting so far as, the next below it, so the lesion on this side seemed much more extensive than on the other, measuring at the widest part quite the third of an inch across. The mucous coat was certainly thickened throughout, and its rugæ more developed than ordinary. No attempt whatever had been made by nature to unite the circumference of the opening to any of the tissues in the neighbourhood, the serous coat around being quite smooth, uninterrupted, and polished. With these exceptions the whole of the organs contained in the abdomen were in structure quite healthy, though singularly deficient in blood, the liver and spleen presenting the appearance as though they had been soaked in hot water. Time was not allowed to examine the chest or brain, but there is no reason to suppose those organs were in anything but a sound state; for the same reason the interior of the intestines could not be examined.

That there are many points of great interest and practical utility about this case is evident, but I conceive that these monograph cases should not have appended to them the opinions of those who draw them up, inasmuch as they are intended to represent positive clinical observation and experience, when each man should think and judge for himself.

THE MAKING OF TAR-WATER.—A method for impregnating water with a greater amount of the medicinal quality of this substance than had previously been procured by solution, has been lately made public by an apothecary of Fecamp. Take of tar three ounces, carbonate of magnesia a drachm and a quarter; mix, and pour thereon a pint of boiling water. After agitating, and boiling the fluid for one or two minutes, filter, and add forty-five minims of vinegar of ordinary strength. The liquor is then usually converted into syrup by dissolving in it twice its weight of sugar.—*Gazette des Hôpitaux.*

EXPLANATION OF

FEVER AND INFLAMMATIONS, AND THEIR TREATMENT,

ACCORDING TO

ELECTRIC LAWS AFFECTING THE NERVOUS SYSTEM

AND THE

APPARATUS OF CIRCULATION;

WITH ILLUSTRATIONS DERIVED FROM THE ACTION OF

BLISTERS AND COLD APPLIED TO DISEASED PARTS.

By W. F. Bow, M.D., Alnwick.

I BELIEVE that, in inflammation and its fever the whole arterial system, heart included, labours under a deprivation of contractile power. No one, now-a-days, will assert that this is not the condition of the arteries of an inflamed part, and I trust that the author of "First Principles of Medicine" has led many to believe that the larger arteries leading to the part labour, also, under lost contractility. I regret that Dr. Billing's views did not permit him to advance a step farther. Had he, when he denied increased arterial action in inflammation, denied, likewise, increased power of action in the heart, I doubt not but he would have found an easier, if not a truer, road than the one he has taken, to explain many morbid phenomena. At any rate, I am sure that his ingenuity would have been less taxed whilst endeavouring to weave a *modus operandi* for some of his remedies.

The universal idea that the vigour of the heart's action becomes increased in inflammatory fever, is a grievous fallacy, retarding the progress of the science of pathology, and, worse than that, leading to daily error in practice.

The action of the heart is *contraction* alternating with *dilatation*, or relaxation. If the contractions be performed with increased force and frequency it is evident this must be at the expense of the dilatations, they cannot be completed; therefore, although the ventricle may propel the blood with more force, the quantity at each contraction must be lessened. If there be increased power of contraction with perfect dilatation, it is as evident that in a given time there must be fewer contractions, for the power gained in this case must be at the expense of velocity. I am aware that such reasoning is objected to on the score that vital actions are not to be explained by laws which govern inert matter, but if there be one exception to this objection, common sense points to it here. Suppose the time required for seventy complete contractions, and as many complete dilations of the ventricle be one minute, let us, by violent exercise, increase the number of contractions to a hundred and ten, and what follows? Why, we are gravely told that by the stimulus of exercise we have caused the heart to act with increased force and frequency from which results accelerated circulation. It is impossible to conceive, however, that the ventricle, with increased frequency, of contraction, can empty itself as completely as before, its dilatations continuing as complete as before; and if it do not empty itself as before, it is as impossible to conceive that it has gained increased power of contraction: the velocity here is gained at the expense of power. If, during febrile action, the ventricle contracted with increased vigour and frequency, it is plain that its dilatations could not be completed, and, therefore, that at each dilatation it could not receive its usual quantity of blood, nor distribute its usual quantity at each contraction, and instead of the disturbance of the heart, as witnessed in fever, we would have the more tranquil, though stronger, contractions, witnessed in cholera; for in that disease we have a heart contracting with increased force and frequency.

Some years ago I had a conversation with a medical friend who, of course, was a staunch stickler for increased force and frequency. In reply to my observations he said, "Am I not to believe in what I see daily? I draw blood for the purpose of reducing the force and frequency of the heart's action, and having done so, the effect sought for is obtained; whereas, if, as you say, there be diminished power of action, bloodletting, which even you must allow to be a debilitating measure, would rather aggravate than alleviate the disease." Just so, because by employing what are called debilitating measures, we check the progress of a disease characterised by great arterial *commotion*, we think ourselves warranted to ascribe this commotion to an increased contractile power of the heart, and, without further inquiry, dogmatically assert that our knowledge of the nature of the disease leads to, and justifies, the treatment, and then triumphantly appeal to the success of our measures as testimony unquestionable of the soundness of our pathological doctrine. Blood-letting, however, to be effective in the cure of inflammation, must be carried so far as to impair the energy of the brain, from which results syncope, or a state more or less approaching to it, and then it is not a debilitating measure *quoad*, the heart and arteries. "But," says Dr. Billing, "will any one call venesection stimulant?" I say, yes, and that neither he nor any other ever did or ever can subdue inflammatory fever by venesection, if by it, the heart and arteries did not or do not become indirectly stimulated.

In March, 1836, I laid before the readers of THE LANCET (vol. ii., 1835-36, page 927) some observations regarding a law of nervous action, to which, as I conceived it analogous

in its operation to the acknowledged law of electricity called induction, I gave the name of nervous induction. I then thought if such a law could be demonstrated, we would find in it a key to the explanation of many physiological and pathological phenomena, and as I am more and more convinced of its existence, I shall as briefly as possible pen some of the views it has engendered.

The law is this:—If one nerve or set of nerves becomes excited, an opposite or negative state is thereby induced in a neighbouring set, having functions different from the set excited, and *vice versâ*.

One very familiar example of the operation of this law is readily observable when the sensitive nerves of a part of the surface of the body become irritated or excited. This excitement induces an opposite or negative state in the nerves which convey contractile power to the neighbouring vascular tissue, and redness results; for the capillaries, thus deprived of contractile power, no longer oppose injection by red blood. In no other way can the redness produced by a blister be explained; the vessels must be operated on indirectly, for the cuticle must prevent any direct influence.

The remote cause of local inflammation being continued, the excitement extends to the whole system of sensitive nerves; and, as a necessary consequence, the opposite or negative condition is induced in the nerves conveying contractile power to the whole arterial system, heart included. Every artery now contains more than its usual quantity of blood, and the heart being similarly conditioned, is incommoded, and stimulated to contraction; but, from the loss of contractile power, its efforts to empty itself, though frequently repeated, are unavailing. Such is the condition of the heart and arteries during febrile action, to remove which the indication is to restore their contractile power, and this can alone be done by allaying the nervous excitement. We must reverse the order of induction, render negative the sensitive nerves, and it must follow that the heart and arteries do recover their contractile power. Whatever impairs the energy of the brain will thus produce a negative state of the sensitive nerves, and this we accomplish by blood-letting, or through the stomach by means of tartar emetic. The sensitive nerves may also be rendered negative through their peripheral extremities by the cold affusion, and by opiate, ammoniacal, and other applications.

It is said that one object aimed at by venesection is to abate the vigour and force of the heart's contractions; but as it is acknowledged that the arteries of an inflamed part, and those leading to it, owe their abnormal state to the loss of vigour, it is made to benefit locally, merely, by "relieving the capillaries, mechanically, by diminishing the quantity of blood." It is evident, however, that relieving these vessels mechanically will not impart to them their lost vigour, which loss is acknowledged to be the cause of their distention, and yet inflammations may be cured by venesection alone. If by blood-letting we did not restore contractile power to these vessels, we might bleed for ever without effecting a single cure.

A state similar to that of approaching syncope may be produced by the administration of tartar emetic. It is characterised by nausea. Here the operative condition of the brain is impaired; it becomes less susceptible of impressions conveyed through the sensitive nerves. We, in fact, produce by this medicine a condition of the brain similar to that produced by blood-letting; it is thrown into a negative state, and the nervous influence which it cannot employ is attracted towards the system of contractile nerves, which, therefore, become positively excited. During nausea, caused in a healthy subject, we have an example of increased force and frequency of the heart's contractions, but that is effected at the expense of its relaxations or dilatations. This state of the heart's action is manifested by a quick and small pulse, not the pulse described by the advocates of increased force and frequency of action, as in fever. It is quick, because the tendency in the ventricle to contract is so strong that the contractions become repeated before the dilatations can be perfected; and it is small, because the arteries throughout the body, having gained additional contractile power, are constricted; added to which, although the injecting power of the heart is increased, the quantity of blood sent forth at each systole is diminished. By the administration of tartar emetic during febrile action, we, through the nerves of the stomach, so impress the brain as to reverse the order of nervous induction, and thus restore to the heart, arteries, and capillaries, their lost contractile power.

Let us here inquire of those who regard the arterial commotion in fever as characteristic of increased power of the heart's action, how they account for the febrifuge properties of this medicine? In "First Principles of Medicine" we find the antimonial classed as a sedative, which, according to the author, is that which diminishes the action of the heart and *other organs*, by repressing the nervous influence; thus it causes the "heart to struggle less and take repose." But the arteries, which are doubtless organs too, do not require to have their action diminished; on the contrary, "an increased action in the arteries, both in and leading to the inflamed part, is just what is required to diminish the inflammation." If tartar emetic diminished the action of the heart, it certainly would, also, that of the arteries, and thus augment the local mischief. This, however, is obviated by a constringing property, with which Dr. Billing endows the medicine, and which,

when it reaches the capillaries through the circulation, stimulates them to contraction. Tartar emetic and sulphate of zinc, however, may be made to produce nausea and paleness long before any constringent property they may be made to possess could be circulated to the capillaries; besides, a state like to that produced by the antimonial is not unfrequently caused by objects offensive to the sight or smell. In such cases the paleness of the countenance shows that the smaller arteries do gain an increase of contractile power which cannot be referred to any constringent property circulated to them. The febrifuge efficacy of the medicine lies in the property it has of diminishing, indirectly, the energy of the brain, and thereby of increasing the contractile power of the heart and arteries, which derive their nerves not from the brain, but from the great sympathetic.

Usual, or natural, impressions on organs chiefly supplied by ganglionic nerves are not conveyed further than to the ganglion through which, or from which, these nerves proceed; therefore, we are not conscious of them. But if the impressions be unusual or unnatural, they, or those arising from the abnormal state of the organ acted on, are conveyed towards the brain, which, being impressed through an unwonted channel, suffers functional derangement: its energy becomes impaired, its condition negative. I speak here of painful or hurtful impressions only. The necessary consequences of this negative condition are that the heart contracts with increased vigour and frequency; but, as its dilatations must be imperfect, it propels the blood in smaller quantity. The arteries and capillaries become constricted, from their augmented contractility: this state is denoted by the feeble pulse. To further the cure of certain inflammations we produce this condition of the system by means of tartar emetic, but in other inflammations, in peritonitis, for example, we find this state of the heart and arteries constituting a symptom of the disease. The painful impression of inflammation of the peritoneum acts on the brain through the ganglia, in the same way as the hurtful impression of the antimonial does through the nerves of the stomach; hence in both cases we have the same general symptoms, differing, perhaps, in degree only, viz., a frequent, hard, small, pulse; nausea, and vomiting.

As I have attempted to show how venesection increases the contractile power of the heart and arteries when employed with the view of reducing symptomatic fever, that is, when the pulse is frequent, full, and strong, I must also endeavour to explain how venesection decreases the contractile power of the heart and arteries when it is preternaturally augmented, as denoted by the frequent, hard, small pulse attending peritonitis. Let it be remembered that in symptomatic fever the heart and arteries are more or less robbed of their contractility; nervous influence is diverted from them by the excited state of the system of sentient nerves; and that when we reduce that excitement by venesection they recover the contractility they had been deprived of. In peritonitis, however, we find the contractile efforts already too powerful; nervous influence has not been diverted from the heart and arteries; on the contrary, they gain a great accession by the brain being thrown into a negative state owing to a painful impression conveyed to it through an unusual channel. In this state we draw blood, and thus render the brain less conscious of the unnatural impression which had deranged its functions and, being relieved, natural impressions again act on it, and force a restoration of nervous influence from the arterial system; and this is well marked by the pulse rising, and becoming fuller and softer, as the blood flows from the vein. Impressions conveyed to the brain through ganglia may, by their depressing influence, suddenly suspend its functions, and then we have not only a powerfully contracted state of the heart and arteries, but a change, for the time, in the nature of the voluntary muscles; they become so charged with contractility that convulsions result, an occurrence not unfrequently observed in infants, from apparently trifling irritations in the stomach and intestines.

By contractile nerves I mean those which proceed from one of the divisions of the great organic, or sympathetic; they convey contractile power to the arterial and muscular systems. The nerves which effect the secretions by the agency of a chemical influence which they carry, proceed from the other division; these I shall denominate chemical nerves.

Hitherto, for the sake of as much perspicuity as I can give to my subject, I have confined my observations to two sets of nerves only. I have said that an excited or positive state of the sensitive nerves induces an opposite or negative state of the contractile nerves; but as other nerves, endowed with functions differing from these two sets, are also distributed to every portion of the frame, it follows that if such a law of induction does obtain, they do also obey it, and observation readily detects the phenomena declaratory of such obedience. A positive state of the sensitive nerves induces a negative state of the contractile nerves, and this state of these latter nerves, in its turn, induces a positive condition of some other set; and we pronounce these to be chemical nerves, for activity of the function of secretion constantly attends diminished arterial contractile power. The series of inductions, however, does not cease here, for absorption becomes deficient, showing that the nerves which regulate this function assume a negative state. Let us reverse the

order of this series of inductions, and we reverse also the order of the phenomena to which they give rise; by impairing the energy of the brain we increase arterial contractile power, render inactive the function of secretion, and give energy to that of absorption.

Disease, local or general, consists in an undue operation of the law of induction, and all our remedial agents act by exciting or repressing its action, or by altering or reversing the order of its action.

We can give intensity of action to nervous induction in various ways, and have corresponding results; thus, during violent exercise, by the excitement of the motor nerves, nervous influence is diverted from the arterial contractile nerves; consequently, as in fever, the heart's action becomes less powerful, though more frequent, and the arteries, from the same cause, permit of distention; hence the arterial commotion. During violent exercise the activity of the chemical nerves is evident from the profuse perspiration, as also from the increased bulk of the muscular fibre whose partial exertion has been long continued, as with the blacksmith's arm. When the series of inductions commences with excitement of the motor nerves, if not carried too far, it is natural, and, therefore, it has a healthy tendency; we see the result in the fuller development of the muscular apparatus in those accustomed to athletic exercise. But when it commences in undue excitement of the sensitive nerves the whole series of inductions becomes morbidly energetic. If local, as in inflammation, the capillaries and smaller arteries are deprived of all contractile power, and become gorged, whilst the chemical nerves, charged by a measure of intensity of nervous influence exceeding that which is natural, and only necessary for the usual decompositions, combinations, and arrangements, are converted into destructive agencies, evinced by rapid disorganisation; thus voltaic electricity of low intensity favours and determines crystalline arrangement, whilst from the same electricity, of too high intensity, we have a confused indeterminate mass.

In the cold stage of fever we have an example of the undue operation of the law of induction, commencing in a negative state of the brain. The remote cause impairs its energy, and the inevitable consequence is that the contractile nerves become inordinately charged with nervous influence. The heart's power of contraction is so increased that its dilatation, though often repeated, is most imperfect; from this, and the constricted state of the arteries, we have the feeble and quick pulse, and the almost confinement of the blood to the venous system. The voluntary muscles, too, become so charged with contractility that our enfeebled voluntary efforts cannot control them, so that tremors, sometimes convulsions, ensue. The function of absorption becomes active, whilst the products of secretion become defective in quantity and quality. This diminished secretion and increased absorption produce a dry and unnatural condition of all the tissues of the body, which, sooner or later, becomes the cause of reaction, by irritating the sensitive nerves with which the tissues are supplied. By this irritation is the order of induction reversed, and hence follow all the symptoms of the hot stage.

Tartar emetics, and other nauseating doses, impair the energy of the brain, and thus produce a state of the system similar to that in the cold stage of fever, excepting in degree only. Need we be surprised, therefore, if, during the operation of such remedies, we witness the disappearance of inflammatory redness, the drying up of ulcers, the subsidence of swellings, and the vanishing of tumours and tubercles? The augmented arterial contractility, the diminished secretion, and the increased absorption, cannot be referred to any specific action of the medicine; they are a necessary series of results of nervous induction, commencing in a negative state of the brain, and they follow such condition of that organ, however caused, whether by medicine, by concussion, by moral causes, by objects offensive to the senses, or by external cold.

In the cure of inflammatory diseases, where time is precious, we administer antimony in doses sufficiently large to derange the operative condition of the brain, and thus effect, suddenly, the state described; but where time is not of such moment, we can influence the organic functions, without apparently affecting the brain, by acting on the nerves of organic feeling with doses so small that the impression produced is not conveyed beyond the ganglions from which those nerves proceed. We all know the violent effects of a large dose of digitalis, but when the medicine is given in small and repeated doses a negative state is induced in the nerves of organic feeling, and the series of inductions which follows is confined to the ganglionic nerves; vascular contractility is increased, secretion diminished, and absorption promoted; hence the benefit derived from this and other medicines of the kind in dropsical effusions and tubercular depositions. As the absorbed fluid is generally thrown from the system by the more natural channel of the kidneys, digitalis is classed with the diuretics; but it occasionally happens that it escapes by the skin, and not unfrequently by the bowels, when the dose has been somewhat large. In cholera there is a most energetic operation of the law of induction, commencing either in a decidedly positive state of the contractile, or in as decidedly a negative state of the chemical, nerves; and it signifies not which, for the one produces the other; contractility is powerfully augmented, secretion is arrested, and

absorption is forced into preternatural activity, the absorbed matters being copiously discharged by the bowels.

The operation of the law of electrical induction is the key by which is explained the principal phenomena of electricity, and by the analogous law of nervous induction many phenomena of nervous action may be easily comprehended, which, if we repudiate such law, defy explanation.

One remarkable phenomenon, incomprehensible without the aid of the law of nervous induction, results from the action on the surface of the body produced by a blister. This phenomenon I shall describe in the words of the author who first made me cognisant of it:—"Thus, I have been informed by a respectable surgeon that he found, on opening the cranium of a patient who had died after a blister had been recently applied, an inflamed mark, exactly corresponding in shape and size with the external mark of the blister, which, penetrating the scalp, and the cranium, was distinctly visible on the dura mater; an effect which could not result from the physical influence of the blister penetrating through parts of different structure, and protected by intervening bone, but may be easily conceived to arise from the external feeling effacing that which is internal, and thereby suspending the action of vessels, its influence extending, as might naturally be expected, in a direction centrical or perpendicular to the place of its application."*

I have been told by a gentleman whose opportunities for observation have been frequent, that he has repeatedly seen marks on the pleura, covering the lungs, having the size and shape of the blister which had been applied to the chest, and the same on the intestinal peritoneum, of the size and shape of the blister which had been applied to the abdomen. Such being the case, blisters placed over the seat of internal inflammations, instead of acting as counter-irritants, must aggravate the disease, and experience confirms this. The author of the article Counter-irritation, "Cyclop. Pract. Med.," says,—"Experience continually proves that, under certain conditions of the system, a blister, or other counter-irritant, aggravates the inflammation which it was applied to remove. If we inquire what those conditions are, we shall find them chiefly to consist of an excited or irritable state of the general circulation, and a susceptibility or excessive sensibility of the nervous system." But why should conditions of the system, according to this puzzling description, give to the inflammation which is produced or aggravated, the shape and size of the blister? I was about to say that the author could not have been aware of this circumstance, for I think it would have enabled him, if not to have been more explicit, to have avoided the explanation attempted; but on turning to the article "Derivation," I find another author, who is aware of the fact, and yet almost as little advantage of it is taken. I find the following in the article alluded to:—

"Mr. Porter, in his 'Surgical Observations on the Diseases of the Larynx and Trachea,' expresses himself strongly against the use of blisters in acute laryngitis, particularly when applied to the neighbourhood of the part. He says they cannot be resorted to at an early period without considerable risk of doing mischief. A case is related where, in acute pneumonia, the application of a blister was followed by an aggravation of the symptoms and death. On dissection, a portion of the surface of the lung *exactly corresponding to the size and shape of the blister, was found in a more advanced stage of inflammation than the remaining pulmonary tissue.* Many authors might be quoted to the same effect."—"If," says the author, "the irritability of the system be great, an increase of fever will be the result of the sympathetic irritation of a blister, and in this way the local inflammation will be aggravated." Admit that an increase of fever does aggravate the inflammation, why should the aggravated morbid action be confined to a space, the size and shape of which is determined by those of the blister? A blister applied at a distance from the local disease does not aggravate it, although the irritation may increase the fever. "Whether," continues the author, "the increase of the local disease be always owing to this cause, or whether it may occur without the intervention of sympathetic fever, are questions of difficulty, but not of great practical importance." I think that the internal morbid action being confined to a space corresponding in size and shape with the external space artificially inflamed, warrants the conclusion that the external inflammation is the direct cause of the internal. The knowledge of the fact, that a morbid action artificially produced on the skin will excite a similar action on an internal surface, is of the highest practical importance; for, if we find that by lessening the contractile power of the capillaries of the skin, by irritating the sensitive nerves of the part, we can diminish the contractile power of the capillaries of an internal surface, we may rest assured that we have also the power of increasing the contractile power of the capillaries of an internal surface, by applying to the adjacent external surface agents which we know do augment the contractile power of the capillaries of the skin. In the cure of internal inflammations, as in others, one of the indications is to restore contractility to the arteries of the inflamed part; we attempt this by what we are pleased to call a counter-irri-

* Inquiry into the Laws of Animal Life, &c., by S. R. Park, M.B.

tant, and experience teaches us that our remedy aggravates the disease, by diminishing still further the contractility of the vessels. Knowing this, let us apply that which will produce an action on the skin the reverse of that caused by a blister, and we shall excite a similar action by induction on the internal inflamed surface. Increase the contractility of the capillaries of the skin, and we shall increase the contractility of the capillaries in a centrical direction. It is thus that cold acts when applied to the scalp in inflammations of the brain and its meninges, and why should we not have recourse to it in pleuritis, peritonitis, &c.? For my own part, I content myself with evaporating lotions, and opiate and ammoniacal liniments; these promote capillary contraction, on the principle on which cold acts, and give decided and permanent relief, especially in infancy and childhood.

The sponging of the chest with cold water has proved beneficial in some cases of incipient tubercular consumption, and had the principle of its action been understood, many more cases might have been added to the list. It acts by augmenting capillary contraction in a centrical direction, and, likewise, in obedience to the law of induction, by promoting absorption. Unfortunately, however, the benefit is supposed to flow from the reaction which succeeds, and the cold, therefore, is prescribed that reaction may follow, and frictions employed the sooner to establish it. Having, by the aspersion of cold water, established a series of inductions from which result increased capillary contractility and absorption, needful towards a cure, we hurry to counteract this healing process by frictions, which, by exciting the sensitive nerves, reverse the order of induction, the result being diminished contractility and increased secretion.

Alnwick, Dec. 13, 1842.

GRAFTING CORNEAS ON OTHER EYES.—Herr Feldmann, in a memoir lately addressed to the Academy of Sciences, states, as the result of experiments performed by him and M. Davis, of Munich, that the cornea, first detached from the eye of an animal, and afterwards replaced and kept in its situation by sutures, forms fresh adherences and cicatrizes firmly; and a similar result obtains, if the cornea replaced, or *grafted*, as it were, be that from another animal—even one of a different species! The success of the operation is said to be better insured when the crystalline lens has been accidentally or purposely removed. Small, indeed, would have been the value if the success of this curious experiment had been confined to fixing firmly in front of a lacerated eye a structure which must ever afterwards remain opake, but it is asserted that the experimenters have been enabled also to procure a partial transparency in the transplanted cornea.—*Gaz. des Hôp.*

CLINICAL DISCOURSE

CONCERNING A

POLYPUS OF THE WOMB.

By W. MACDONALD, M.A., M.D., Teacher of the Practice of Physic in Laennec College, Glasgow.

[Read before the Students, in Public Class, December 7th, 1842.]

To the Editor of THE LANCET.

SIR,—I send the enclosed discourse, requesting the favour that it may appear in your valuable Journal at a convenient time. Your faithful servant,

WILLIAM MACDONALD.

44, York-street, Glasgow,
Dec. 22, 1842.

The morbid structure which I hold in my hand is a polypus of the womb. A polypus is a tumour which is generally narrow where it originates, and then becomes wider and larger in the course of its growth, and that also in every part of its texture, excepting at the neck, until the tumour assumes the shape of a pear. Polypi are frequently situated in the nose, in the womb, or in the vagina, and these tumours have received the name of polypi from a very unfounded assumption entertained by the ancient physicians, viz., that each polypus had several roots, like zoophyte polypi. Accordingly the term polypus had been founded on this very erroneous idea, and of consequence had been derived from the Greek adjective πολυς, *many*, and also from the Greek noun πους, *a foot*, as every tumour of this kind was supposed to send off several ramifications, like legs.

Polypi are said to differ from each other, both in relation to the different causes which produce them, and also in relation to the different alterations which happen in them. Sometimes a polypus of the nose is caused by a swelling of the pituitary membrane, which swelling may occupy a greater or less space of that membrane, and also of the cellular substance placed beneath it. Again, these diseased structures may affect either one or both nostrils. Occasionally a tumour of this kind is found to arise from an ulcer, in connection with a caries of some of the bones which form the internal surface of the nostrils. These adventitious growths are sometimes so very soft, that upon the least touch they become lacerated, and consequently bleed; whereas at other times they are not only found compact but occasionally scirrhous.

When these adventitious growths are found in the womb they occupy one or other of the three following situations, viz.,—First, they either grow from the fundus of that organ, like the present; secondly, from the internal surface of the cervix of the uterus; or, thirdly, from the lower or exter-

nal edge of the os tincæ. The first situation of these tumours, viz., at the fundus of the womb, is generally believed to be their most common locality, whereas the last-mentioned situation seems to be the most uncommon.

The following narrative discloses what I believe to be a faithful history of a very interesting and successful case, viz.:—

Mrs. A., aged thirty-nine years, lately married, and very recently arrived in this city from the country. Her relatives have been reported healthy, both as to their ascending, descending, and collateral branches. She is of an active constitution, and of the bilious temperament; her habits, regimen, general functions, and sympathies, were well constituted until 1837: towards the latter end of that year, however, her catamenial flux was suddenly suspended, in consequence of taking cold from wet feet. She has occasionally complained since that period of an indescribable feeling of being out of order, &c. She has gradually lost strength ever since; her appetite became also impaired; an aching pain of her back, coupled with dyspeptic symptoms, followed. She complained at one time in consequence of a mucous and sometimes of a bloody discharge from the vagina. She frequently felt a variable swelling of the abdomen, and lately she had some uneasiness of the uterine region. She recently believed herself to have been pregnant; in this respect, however, she has been in error, as the sequel of her case will show.

Three weeks ago she was seized with severe flooding from the womb; it was for the purpose of checking that disorder that I was suddenly called to visit her. When I saw her I remarked the great paleness of her face and skin; the disturbed state of her intellectual system; the excruciating pain of her head (which was affected in various parts, alternately in the forehead, in each eye, at the crown of the head, and at the nape of the neck); the quick and weak state of her pulse; the impaired condition of her digestion; and the unwillingness she evinced either to fix her attention on any subject of inquiry, or to move herself in any way whatsoever; all these effects had arisen from excessive loss of blood.

It seems that the day before I saw her she had very properly taken a blue-pill, followed by a cold infusion of senna, as she apprehended the approach of a bilious attack. These medicines acted well; and as I was satisfied that Mrs. A. was not pregnant, and as I believed that she laboured from menorrhagia, my attention was, in the first instance, directed to the use of astringents, in order to stop this alarming flow of blood. In order to this a series of draughts were prescribed for her, each draught containing half a grain of the superacetate of lead, combined with ten drops of the tincture of opium, together with an ounce of distilled water, and this combination was to be given every two hours. Cold applications were applied to the vulva. Cold drinks, containing elixir of vitriol, were given at intervals: all warm drinks were discontinued. Her garters were very firmly tightened in the usual place where these ligatures are worn, and similar ones were also applied to the arms, at the axillæ, in order to moderate the flooding; immediately a cessation of the flooding was temporarily produced.

As I now had some reason to hope that the patient would not be subjected to any relapse of her hæmorrhage, depending, as I thought, on menorrhagia, I did not examine the state of the vagina and womb on the occasion of my first visit. I regret that error of omission, and I recommend to you on all similar occasions to make yourselves masters of the condition and state of those very important organs, as serious events may arise out of such omissions.

Shortly before my next visit the garters became accidentally slackened, and the flooding returned. Under these circumstances the introduction of the plug into the vagina became necessary; I accordingly examined the state of the vagina and neighbouring parts, before the introduction of the plug. (I also recommend a similar examination to your favourable consideration at all times before you introduce the plug.) In the course of my examination I detected a large fibrous mass in the upper part of the vagina, the bulk of this fibrous mass being nearly as large as the fœtal head at the full period of utero-gestation. From the state of the tongue, which was smooth and red, having no papillæ developed on its surface; from the presence of a small fissure being detected on the lower or presenting portion of the tumour; from the circumstance of the tumour giving her pain when touched or moved, I was led to think that this tumour might either be the womb itself, in a state of disease, or inverted, or in a condition called prolapsus, or, finally, that the tumour might be a large polypus.

In this critical conjuncture the benefit of farther medical advice seemed to be desirable; I accordingly introduced the plug into the vagina, and requested the favour of the attendance of Dr. James Wilson, formerly interim lecturer of midwifery in the university of Glasgow. On examination, the doctor also suspected that the tumour was the womb; he came to that conclusion before I gave him my own opinion, which agreed in all respects with his, viz., that the tumour seemed to be the womb. The notion of the tumour being prolapsus uteri was afterwards found untenable in consequence of the fissure, on its lower border, being believed to be an ulcerated cavity. Again, there were commanding probabilities opposed to the notion of the tumour being an inversion of the

womb, and particularly of the fact of our patient never having been pregnant, and never having given birth to a child; yet in this conflicting state of reasoning it was contended that inversion of the womb might take place even in the virgin state, in consequence of the womb being distended either with blood or other fluids. Farther, on the occasion of again examining the parts, the tumour seemed to be less sensible on touching it; accordingly the commanding probabilities were now in favour of the diagnostic symptoms of polypus of the womb, although readily admit that some degree of conjecture was applicable to this diagnosis in our minds.

Acting under the impression of this conjectural view of the disease, we proceeded to operate, determining in our own minds to remove the ligature from the tumour, provided that much pain were produced by its application, well knowing that if the tumour were the womb great pain would be produced by the act of tightening the ligature around the base of the tumour.

On the first occasion of our attempting to apply the ligature around the tumour we failed to accomplish the object in view, both on account of the great size of this tumour, and also on account of our not being able to ascertain the state and position of the os uteri; accordingly we desisted from our purpose, and determined to recommend the use of the plug for a short time longer.

We again attempted to remove this tumour by the ligature, and on the second occasion of trying to do so we succeeded, and that by means of the instrument which I now hold in my hand. The best method of using this instrument is as follows, viz.,—The os tincæ being first felt in the usual way, the finger is retained in apposition with the aperture of the womb, in order to serve as a guide for the introduction of the two silver tubes of the instrument, armed with the requisite ligature, into the cavity of that organ; both tubes are then pushed gently up to the fundus of the uterus. These two tubes are subsequently withdrawn, to the extent of half an inch, along the neck of the polypus; then these two tubes are separated from each other until they meet at the opposite part of the neck of the tumour. By this means the ligature surrounds the uppermost portion of the diseased structure; the two tubes are then held by the assistant, and the slide is subsequently placed on the said two tubes. The ends of the ligature are then tightened, and afterwards firmly secured by a knot at the bottom of this slide. At the end of every day or two, and upon each occasion of tightening the ligature, this is done to the extent of the third part of an inch, even until the tumour slough off, which event takes place from the fifth to the tenth day after the completion of the operation. In this successful case the polypus came away on the fifth day after the operation. The tumour weighed ten ounces and a half, after the blood had been removed from a large cyst found in its texture. The reason of the supposed great size of this polypus, when placed in the vagina, arose from the circumstance of its containing the aforesaid very large cyst of blood, which had partly escaped through the ulcerated surface of the polypus into the vagina, and thus the disease in question resembled at first a very severe case of menorrhagia. After the operation the womb was cleaned out by means of tepid water. Mrs. A. gradually improved in health, under the influence of generous diet and tonic medicines, and especially by the aid of the following mixture, viz., equal parts of tincture of opium, tincture of valerian, and spirits of nitrous ether, made up as a mixture, and a teaspoonful to be given twice or thrice daily, in a little gin and water. She is now quite well, or in the full enjoyment and exercise of all her organic and animal functions.

This case is very interesting and instructive, from four different circumstances, viz.:

1st. From the error that I committed in not examining the condition of the vagina and womb on the occasion of my first visit, because the great hæmorrhage of which my patient complained warranted me in immediately doing so. Thus, in studying the history of individual cases of disease, we weigh the opinions and the actions of medical practitioners, in order to avoid similar errors in our own practice, and thus to profit even by their example. Consequently, practical bearings are to be constantly studied, together with all notable examples of skill, in order to bring the ends of health about. Accordingly, judicious censures on our own and other men's treatment of particular diseases will be called up by the association of our ideas; and, at the same time, all things that may serve for proof or disproof, illustration or amplification of any interesting plan of treatment, will be recollected. Indeed, in this way the circumstances of practical axioms will be recollected, and the reasons why they prove successful will be considered; while, at the same time, the errors of omission and commission applicable to our medical friends, and the reasons why they prove unfortunate, will also be fully and fairly accounted for on the basis of cause and effect.

2nd. This case is interesting from the great difficulty which two practitioners experienced in forming a diagnosis, and when the diagnosis was made it was conjectural or otherwise depended on the commanding probability of events, viz., whether the ligature produced much pain or not on its being tightened.

3rd. The history of this disease is also interesting from the analogy of cases in which tumours similarly situated were believed to be polypi, turning out to be the wombs of

patients in an inverted state; and in which cases the ligatures were applied, constitutional symptoms followed; the ligatures were not immediately loosened; the majority of the patients died, and the tumours were after death found to be really the wombs in different states and stages of inversion.

4th. This case may become very interesting provided that our brethren afterwards prove, in their experience, that the absence of papillæ on the dorsum of the tongue of patients ailing of polypi of the womb may afford as valuable a diagnostic symptom as the absence of these papillæ does in cases of organic disease of the brain, lungs, heart, stomach, intestines, spleen, and glandular system, especially after acute diseases have arisen in bad constitutions, and after protracted fevers; for I had occasion to remark,* that in all the aforesaid organic affections (for at that time I had no experience of uterine polypi), "that the tongue presents for a long period a smooth morbid redness, with a more deep red colour of the raphe or linea linguæ medianæ; by compressing the tongue with the lips the papillæ are not to be seen even by the aid of microscopes." On that occasion I had attributed the disappearance of the papillæ in these organic affections to the increased action of the function of absorption, in consequence of the presence of the organic diseases then mentioned. Now, should the experience of the profession confirm my present position relative to the absorption of the papillæ of the tongue also in cases of polypi of the uterus, I shall still be disposed, with their concurrence, to attribute the absence of these papillæ to the former cause, viz., increased action of the absorbents. This view of these facts is not without analogy in medicine; for practical authors have invariably believed that the disappearance of the fat in patients ailing of protracted fevers, depends on absorption, and that when such a result happens, the human body may be said to live on itself.

BIRTH OF A SECOND CHILD TWO MONTHS AFTER THE FIRST.

To the Editor.—Sir: On reading an account of Dr. Jameson's "extraordinary case of twins" last week, it reminded me forcibly of a similar case which occurred in the practice of a veteran accoucheur in this neighbourhood many years since. I send you the facts, though brief, without comment, as related to me by him about six months ago.

Martha Lowe, in her fifth pregnancy, was taken in labour at the seventh month of utero-gestation. A midwife was in attendance, when, at the expiration of a few hours, a little girl was born. The after-pains were unusually troublesome and severe for a short time, when Mr. B.'s aid was requested in order to prescribe for the pains. She stated at the time that there was positively another child in her womb, and that she should *then* retain Mr. B. to perform, at the end of *two months*, the duties of accoucheur at the birth of the next child. At this rather novel engagement Mr. B. smiled (not dreaming that she was in earnest), and promised to send her an anodyne, which abated all the pains, and in a short time she was well, and busily engaged about her domestic affairs, and so continued until exactly the day two months from the first time that Mr. B. was called in, when, in his presence, another living child, full-grown, of the same sex, was speedily ushered into the world. In the interim of the two births, at the month's end, as is usual, the patient was churched, for safely passing through her first accouchement. The eldest child lived but a few months; the last born is still living, and six months ago resided with her mother, a fine young woman, nearly twenty years of age, I am, Sir, your's most obediently,

J. T. Vale, M.R.C.S.L.

Birkenhead, Cheshire,
Dec. 31, 1842.

* See Lancet, No. 667, June 11, 1836.

Lemon-Juice in Dropsy.—Dr. Buettner (*Medicinische Zeitung*, 1842, No. 26) is said to have obtained useful results from the employment of fresh lemon juice in two acute dropsical cases. The first was a case of ascites, with œdema of the lower extremities, supervening after intermittent fever. To the use of lemonade, one-third of which consisted of fresh lemon-juice, the recovery of the patient was supposed to be due. The second case was one of inflammatory hydrothorax, acute symptoms of which were reproduced six times in about three weeks, but subdued by a spoonful of lemon-juice every two hours, accompanied, however, by plenty of bleeding and low diet. To the last-named vulgar remedies, we must say that *we* attribute the cure in this case; the Germans, however, take for granted, at least, that great efficacy attends the employment of lemon-juice in the dropsy consequent on scarlatina. It should be mentioned that the virtue resides in *fresh* lemon-juice only. All other, or the citric acid of the shops, was found by Dr. Buettner to be quite destitute of any curative property.

Medicines in Germany are subjected to duties determined in an annual tariff. The ordonnance of the Grand Duchy of Baden, on this head, for 1842, fixes the duty on an infusion at 1 kreutzer per ounce (about a farthing); on the filtration of a pint of liquid, 4 kr.; on an emulsion, 4 kr.; on a packet of powders, 1 kr.; on an extract, or a pillular mass, 6 kr.; a simple mixture, 1 kr. We are at a loss to discover the utility of this to any persons but the tax-eaters.

THE THEORY OF "CELLS" OPPOSED.

The Structure of Fibrinous Exudations, or False Membranes; Origin of Fibre.—It has been commonly supposed that fibrine exhibits an organised appearance only when it has coagulated in contact with the living textures. In his Notes and Appendix to "Gerber's Anatomy," Mr. Gulliver has depicted a distinct structure in fibrine which has set, either within or out of the body, simply from *rest*; and a similar character is shown in a false membrane. He now gives several more figures to exhibit the analogy, in structure, of fibrine coagulated merely from *rest*, and fibrinous exudations resulting from *inflammation*. This structure is made up of fibrils of extreme delicacy and tenacity, and of corpuscles possessing the characters of primary cells, or organic germs.

Of late years the origin of fibre, as well as of all other tissues, has been ascribed to the growth of *cells*; but these observations of Mr. Gulliver render it probable that cells are not essential to the formation of all textures, since it would appear that fibrils, which may be the primordial fibres of certain parts, are formed, in a few minutes, by the simple act of *coagulation* in fibrine.

M. Gerber (Gen. Anat., figs. 16—18), has delineated what he terms the first, the second, and the complete stages of *fibrillation*, in the progress of organisation in the fibrine composing coagulable lymph; but he does not say how much his drawings are magnified, though in some of them a very low power must have been employed. Others are sufficiently enlarged to show the cells from which he says the fibres are formed, and this is precisely the point on which Mr. Gulliver says that his observations are at issue with the views now generally entertained concerning the origin of fibres.

"All the organic tissues," says Dr. Schwann, "however different they may be, have one common principle of development as their basis, viz., the formation of *cells*; that is to say, nature never unites molecules immediately into a fibre, a tube, and so forth, but she always, in the first instance, forms a round cell, or changes, when it is requisite, the cells into various primary tissues, as they present themselves in the adult state." (Wagner's Physiology, by Willis, p. 222.)

"How," continues Mr. Gulliver, "is the origin of the fibrils which I have depicted in so many varieties of fibrine to be reconciled with this doctrine? And what is the proof that these fibrils may not be the primordial fibres of animal textures? I could never see any satisfactory evidence that the fibrils of fibrine are *changed cells*; and, indeed, in many cases the fibrils are formed so *quickly* after coagulation, that their production, according to the views of the eminent physiologist just quoted, would hardly seem possible; nor have I been able to see that these fibrils arise from the interior of the blood-discs, like certain fibres delineated in the last ingenious researches of Dr. Barry." Such are the remarks of Mr. Gulliver in his "Contributions to Minute Anatomy," in the number of the "Lond. and Edinb. Philos. Magazine," for Oct. 1842.

THE BLOOD.

DIFFERENCE OF THE PUS-LIKE GLOBULES OF THE BLOOD IN HEALTH FROM THOSE IN DISEASE.

Although the pus-like globules which are found in the blood of patients who are affected with various severe inflammatory and suppurative diseases, are very like the pale globules now so well known as belonging to healthy blood, it often happens that the former globules differ manifestly from the latter. In inflammatory affections the pus-like globules of the blood are generally rather larger, more irregular in size and form, and sometimes more opake, than the pale globules of healthy blood; and the globules occurring in disease are frequently clustered together very remarkably. They are sometimes of a reddish colour, including from one to four blood-discs, rarely five or six, in a very delicate and pale envelop. Besides, in the pus-like globules of the blood of patients labouring under inflammatory disease, the molecules composing the nucleus are mostly surrounded, and often are more or less separated, by a quantity of minutely granular matter, which is either generally less obvious, or even absent, in the pale globules of healthy blood. In a case of great swelling, with purulent deposit, in the leg of a mare, the pus-like globules presented an average diameter of $\frac{1}{3225}$th of an inch, and were nearly as numerous as the red discs; while in the blood of a healthy mare, examined at the same time, for comparison, the pus-like globules were by no means so plentiful, and they almost all ranged between $\frac{1}{3333}$th and $\frac{1}{2500}$th of an inch.—*Mr. Gulliver, Lond. and Edin. Phil. Mag.*, Sept. 1842.

MODE OF FORMATION OF RED GLOBULES.

Dr. Remak, of Berlin, has been able to distinguish these bodies in the blood of an embryo chick in the third week of artificial incubation, as well as in the embryo pig an inch in length, in which last he finds they are from four to six times as large as in the full-grown animal. In the chick they are of different shapes,—rounded, pyriform, and pediculated, or elongated, and with a nucleus at either end, united by a minute prolongation. This last condition has given rise to a notion

that the reproduction of the globules takes place by a procedure analogous to fissiparous generation. Dr. Remak had recourse to the following experiment to ascertain in what way the red globules were reproduced, and the facts that he observed throw some light on the process:—A horse was bled for several successive days, as much as 30 lbs. of blood being taken from him on the first day. At that time the red globules were very abundant, while only a few colourless globules were present. Next day the latter were numerous, and mostly enlarged, having in their interior one or more globules of a pale-red colour surrounded by small granules. On the succeeding days these globules deepened in colour, and, correspondingly, the accompanying granules disappeared. On the fourth day it became evident that red globules, similar to those existing in the blood in an independent state, had been formed within the larger colourless corpuscules, and set free by the bursting and disappearance of the latter. Similar phenomena presented themselves in similar observations on the blood of the frog and the human subject. In man, between the fourth and eighth day, after the loss of a large quantity of blood, and notwithstanding the presence of typhoid and inflammatory diseases, the reproduction of the red globules goes on in the same way, as proved by the discovery of a proportionable quantity of the outer films of the colourless globules in the clot. In fact, according to Remak, the clot is in a great part composed of these films, and to the quantity of them that it contains it owes its relative softness. M. Remak anticipates obtaining further characteristic signs of difference between a clot composed chiefly of these films, and another formed mostly of coagulated fibrine owing to slow coagulation.—*Med. Zeitung*, No. 27.

DERANGEMENT OF THE BRAIN BY A SUDDEN SHOCK, AND ITS RECOVERY BY SIMILAR MEANS.—("SIMILIA SIMILIBUS.")

By S. Patterson Evans, M.D. Edin., Newmarket-on-Fergus.

A labouring man brought to me his son, nineteen years old, for my advice. Having attended him for a cut leg two months previously, I was much struck now with his altered appearance. When coming to me before, I thought him remarkably acute and intelligent; he now had become *idiotic* in countenance and manner. He did not know my name, his own, or his father's; continually talked to himself indistinctly; sang; made grimaces; laughed with a foolish look; would leap about, and otherwise behave ridiculously. His answers were peculiarly short and snappish, nor could he keep steady a moment, but was altogether restless and irritable. At home he attempted to injure his sisters with a knife. Appetite good; sleeps pretty well, but often starts with a scream in his sleep, as if frightened. When asked a question he did not appear to comprehend its meaning until repeated. When questioned as to pain he put his hand to his head, but did not reply; and from frequently applying his hand all over that region, it appeared to be the seat of some general pain or uneasiness. The head, generally, felt hot, and especially the forehead; the temporal and carotid arteries pulsated rather strongly; the pupils were contracted, and the sclerotic vessels more minutely injected than I had ever seen those vessels before; no vomiting, nor any lesion of the muscular system. Upon my asking his father whether he could account for this alarming state, he gave me the following singular history:—

Up to the 22nd of Nov., 1842, he was perfectly well and able to work. On that day he happened to kill a hen belonging to a woman, who complained of him to his mother, who told his father of what he had done. The boy, knowing that his father would punish him, did not come in to go to bed until he supposed his father was asleep. However, the old man, who was very apt to be guided by King Solomon, and not "spare the rod and spoil the child," stole to the bed when the boy lay asleep, and, catching him by the hair, gave him a few smart strokes of a small sally rod. He then left him, going out to his work. That day his mother remarked that the boy looked rather silly, and talked incoherently, and then daily got worse.

I therefore ordered the head to be shaved, cold applied, leeches to the occiput and neck, colocynth and calomel. He was ordered to be kept quiet, in a dark room, and on low diet. Owing, however, to his father's being constantly out at work, and he being the only person who could manage him, my directions were not followed up, with the exception of giving him the purgative, and throwing cold water over his head every morning. After some days I saw him again, but he appeared no better. The bowels were particularly obstinate. (Prescribed accordingly.)

Five or six days after this I saw him again, and was surprised with the change in his manner, as well as his altered appearance. He now knew me; answered questions rationally; talked quietly; had lost the restless manner; and, in fine, he was quite another boy. His pulse soft; tongue pale and moist; head cool; eyes natural, intelligent, and uninjected; but, upon inquiry, I found that though he had taken all my last medicines regularly, he was not indebted to them for his recovery, for up to the day previous he was as bad, if not worse, than before; but his father gave me the following singular account of his recovery, which I

consider inexplicable upon any other principles than those advanced by Hahnemann in his axiom, *similia similibus curantur*:—

The day before that upon which I saw him last, he was on the road-side, amusing himself; a carman was going by; the boy flung a stone at the man, who caught the boy, and *gave him a good beating with his whip*. The boy ran home crying, told his mother what had happened, and from that day, as if a devil had been cast out of him, became quiet and rational, and he is now perfectly well, though not as steady, sharp, or intelligent, altogether, as he was before the accident.

How much we have yet to learn, how little we really know, of the nature and rational treatment, not only of the diseases of the cerebro-spinal system, but of disease in general! Assuredly, the uncertain and most unsatisfactory art that we call medical science is no science at all, but a jumble of inconsistent opinions; of conclusions hastily drawn; of facts badly arranged; of observations made with carelessness; of comparisons instituted which are not analogical; of hypotheses which are foolish; and of theories which, if not useless, are dangerous. This is the reason why we have our homœopathists and our hydropathists; our mesmerists and our celestialists!

I will offer no comments upon the foregoing case. My experience in diseases of the mind has been too limited, and my observations would perhaps only destroy the impression which the case is calculated to make. At the same time, I cannot conclude without directing the attention of parents, and those who have the charge of children, to the lamentable results which may follow the infliction of corporal punishment upon young children, of tender age and delicate constitutions. It enfeebles their minds; it undermines their attention and memory; it breaks down the finest of their moral feelings. But especially is it followed by terrible results when unexpected or sudden. Indeed, at any time, taking the nervous system by surprise, with violence, may be followed by consequences equally awful.—*Abridged from Dub. Jour.*, Jan. 4th.

EMPLOYMENT OF THE SULPHATE OF QUININE IN THE TREATMENT OF ACUTE RHEUMATIC GOUT.

M. Briquet, Hôpital St. Louis, having observed the salutary effect of sulphate of quinine administered in typhus fever to be due to its diminution of nervous excitability, retardation of the pulse, and power of lowering the temperature of the surface, has been guided thereby to its employment in acute articular rheumatism, a disease which indicates treatment for similar ends. Accordingly, the first case in which he employed quinine against that disease having resulted entirely to his satisfaction, he made trial of it in numerous other instances, and has carefully recorded the experience of himself and his friends in twenty-three cases. Of the patients treated, fifteen were males and eight females, and mostly between twenty and thirty years of age. About one-third of the whole were of a naturally robust constitution; the other two-thirds were small-framed, or of a lymphatic temperament. The period of their being submitted to M. Briquet's treatment varied, on an average, from three to five days after the first access of pain and swelling in the articulations. More than one-third of the number had been previously affected with acute rheumatism, and nearly one-fourth presented symptoms of chronic pericarditis. Most had a sallow complexion, and the tongue moist and furred; nearly all experienced great thirst and want of appetite, while diarrhœa and cough were unfrequent. In four the pulse beat from 60 to 65 per minute; in thirteen, from 70 to 90; and in the six remaining cases, from 100 to 120, at the commencement of the treatment.

According to circumstances, from a drachm to a drachm and a half of sulphate of quinine, dissolved in twelve ounces of water by the aid of a little acid. sulph., was administered in the course of the first twenty-four hours, in equal hourly doses; and a similar quantity every succeeding day, till an amelioration was manifested. This, however, in all but four cases, took place after the first twenty-four hours. In one case the morbid symptoms ceased altogether after forty-eight hours of treatment; and the same result ensued in fourteen cases during the third day, and in six during the fourth. The dose was then gradually diminished, by from fifteen grains to half a drachm daily, and the treatment rarely lasted for more than six or eight days, during which the patient had commonly taken six or seven drachms of sulphate of quinine. The circumstance of the disease being of long standing appeared to have little or no influence on the period required for cure. Only one case refused to yield to the treatment employed, and in none of the cases was a relapse observed.

After the publication of the above statements in the "Gazette Medicale," M. Rognetta advanced, in the "Gazette des Hôpitaux," that quinine was long ago employed with success in rheumatism by Rasori, Giacomini, and others. He states, however, that his own experience, as well as that of Giacomini, &c., has proved very large doses of this remedy to be often causes of grave cerebral affection, when not closely watched.

Against M. Briquet's practice of using the quinine in doses of such considerable strength, in the twenty-four hours, M. Devergie, of the same hospital (St. Louis), also

loudly inveighs, as being apt to cause serious disturbance in the functions of the brain and organs of sense. His objection, however, Devergie considers to be little, if at all, applicable to the employment of the remedy in doses amounting to from fifteen to thirty grains per diem, or when that amount is increased *gradually* to the minimum of the doses prescribed by M. Briquet; and he has, accordingly, used it in such doses for the treatment of both acute and chronic rheumatism, with marked success. From the accounts of seven cases recently detailed by him, we extract the two following, one of either form of the affection, with his general observations on the action of quinine in rheumatism.

Case 1.—Michon, ætat. 16, a trader in wine, habitually occupied in under-ground vaults, and of a lymphatic temperament, entered the Hôpital St. Louis on the 12th of November last. He had suffered from an attack of acute rheumatism in the October previous, for which he was treated by bleeding, &c., in the Hôpital la Charité, where he had remained about a month. On returning to his business the disease re-appeared, and in a few days afterwards he placed himself under M. Devergie. On the 13th the acute form of rheumatism was decidedly marked in him: he had severe pain in the course of the sciatic nerve; the right wrist was also painful, red, and swollen; the surface generally hot, though moist, and the face sallow; the pulse was full and quick, and a bellows-sound was obvious at the first stroke of the heart, though little functional disturbance in that organ was perceptible by the patient. Ordered bleeding to twelve ounces (three palettes), and fifteen leeches to the region of the heart. By the next day the patient was better; the rheumatic pains were less intense, and the bellows-sound had decreased. But the alleviation of the symptoms was not permanent, for on the succeeding day the patient was subject to pains in both shoulders, even more acute than those previously felt in the wrist and thighs. Sulphate of quinine was now administered, in successive doses, amounting to fifteen grains in the twenty-four hours. This treatment was pursued for two days, during the second of which the pulse became much slower than before, while the pains had very much diminished. On the 17th, the doses of quinine were augmented by one-half. On the 18th, pains still less acute; pulse natural; very little bellows-sound during the action of the heart; but *a slight buzzing sound in the ears annoyed the patient.* Doses of quinine diminished to fifteen grains per diem. By the 20th inst. the only vestige of the previous attack was some stiffness in the leg on walking; and on the 21th the patient was pronounced cured. Up to the 10th of December no relapse had been experienced, and Michon left the hospital on the succeeding day.

Case 2.—Gaudry, a tile-maker, working continually in a damp situation, 31 years of age, and of a lymphatic temperament, was admitted at St. Louis on the 15th of November, ult. Had been attacked several times by rheumatism in the joints, which had been subdued by means of leeches, baths, fumigations, &c., but for four months previously to his admission he had suffered perpetually from rheumatic pains, which at this time prevailed in most of the articulations, though without these presenting any other marks of acute inflammation. Ordered sulphate of quinine to fifteen grains per diem. Three days afterwards headach had occurred, unaccompanied by alleviation of the pains. Quinine increased to half a drachm daily. On the 19th (two days afterwards), decided cephalalgia, with buzzing sound in the ears (*bourdonnemens*) and nausea, which compelled the reduction of the sulphate administered to fifteen grains daily; the patient, however, walked with more ease. The doses were still further diminished in amount on the 20th, and again brought up to fifteen grains *per diem* on the 21st inst. The same quantity continued to be taken every day till the 28th, when the pains had wholly disappeared, though some headach and buzzing in the ears still remained, and an attack of urticaria had supervened in the night last preceding. The quinine was now discontinued, and down to the 28th Dec., ult., the patient had experienced no further rheumatic attack, though the urticaria had not, at the last-mentioned date, been got rid of.

M. Devergie deduces the following observations from his adoption of quinine in nine cases of rheumatism,—three of an acute form of the disease, though without much intensity, and the other six cases of chronic rheumatism. In all these cases a return to health was effected in a very short time, the quantity of sulphate of quinine administered daily having been only in one instance more than from thirty to forty-five grains. Irritation of the digestive tube supervened on the use of the remedy in two cases; but this was apparently more of a nervous than an inflammatory character; for the appetite remained unimpaired in these cases. In one instance spasm of the urethra followed the use of the sulphate. The cephalalgia and buzzing in the ears were pretty constant symptoms, doubtless owing their occurrence to congestion in the brain; and this circumstance should caution practitioners as to how far the medicine is applicable to patients of a plethoric habit, or who are liable to cerebral congestion, at the same time that it suggests the expediency, in many cases, of preceding the use of the sulphate by venesection. Cutaneous affections often follow the use of quinine in rheumatism; three of the above nine subjects were thus attacked when the primary disease had succumbed;

one by a variolous complaint, another by urticaria, and a third by erythema. Upon the whole, M. Devergie considers sulphate of quinine more efficacious in the treatment of chronic than of acute rheumatism; but in the former much smaller doses of the remedy are indicated.—These views of M. Devergie are developed in the "Gazette Medicale" for Dec. 31, 1842.

EMPOISONING IN THE NAME OF MEDICINE.

In the course of the last year a person named Lessechop died suddenly, at St. Malo, a rumour after his death soon prevailing (backed, as will afterwards be shown, with considerable probability) that the fatal event was caused by a remedy which had been administered to him by his "physician," a Mons. Macé, who had settled in St. Malo about a year previously, but who appeared, in fact, to be so ignorant of the action and strength of the drugs which he prescribed that several of the apothecaries in the town refused to make up his prescriptions, the errors which they presented being so glaring. On the 9th of March he ordered for M. Lessechop a dozen pills, containing together *a drachm of cyanuret of mercury!* Struck with apprehension at the impending consequences, the apothecary remonstrated with M. Macé on the unusual amount of the dose he had ordered. The latter immediately retracted his prescription, and substituted, first, cyanuret of potassium, and afterwards iodide of potassium, instead of the cyanuret of mercury. But on the 29th of the same month he ordered a formula consisting of a drachm of cyanuret of potassium, in two ounces and a half of orange-flower water and syrup, of which the patient was to take three spoonfuls a day (*trois cuillerées par jour*). Three-quarters of an hour after the first dose had been taken the patient had ceased to exist.

Inquests before coroners do not take place in France, nor any inquiry which invariably embraces sudden deaths. The corpse was about to be interred, when, in consequence of the loud rumours respecting the decease of M. Lessechop, an autopsy was ordered by the authorities to be made, and at that examination it was, indeed, ascertained that organic lesions existed which must ere long have put an end to the patient's life, but which would not account for the suddenness of the death. The chief digestive viscera were extracted and sent to Rennes, to be examined by M. Malaguti, chemical professor of the Faculté des Sciences in that town, and MM. Sarzeau and Euyot, but who, after a minute investigation of the stomach, duodenum, œsophagus, &c., were unable to discover therein the least trace of the poison. There remained, however, a portion of the mixture of which M. Lessechop had taken a dose, and this was proved to contain cyanuret of potassium of unimpaired quality. It being well known that healthy dogs, to whom a dose such as that which was prescribed for the deceased is administered, are killed by it almost immediately, the medicine was naturally regarded as the cause of the death. The subsequent medical investigation came before the police tribunal of St. Malo, by which M. Macé was condemned to pay a fine of two hundred francs (8*l.*) as a person who was guilty of *involuntary homicide*. A double appeal was made from this decision, one by the Government, as the prosecutor, and the other by the defendant, to the Royal Court at Rennes,* where the cause occupied the court during three sittings. The defendant pleaded that the deceased himself, who had formerly studied medicine, had requested him (M. Macé) to employ the cyanuret of potassium; and he added that he had ordered the doses to be measured not by a *table*-spoon, but a *tea*-spoon (*cuillerée à café*); and, further, that he had ordered the medicine to be taken in milk. He finally asserted that many practitioners of authority, and particularly M. Trousseau, recommended the employment of the remedy in question in doses such as he had prescribed. Against all participation in so monstrous an error M. Trousseau felt himself compelled to disclaim in the *Gazette de Tribunaux*.

M. Malaguti was called upon to give evidence in the case, and he stated that in order to prove if the substance given to M. Lessechop was actually capable of causing death, as it was generally supposed to be, himself and his colleagues had experimented purposely on several dogs. And among other facts they verified that a large French spaniel fell dead "as if struck by lightning" (*comme foudroyé*), after swallowing about a third part of a solution containing eight grains of cyanuret of potassium. In answer to some questions addressed to him by the president of the court, M. Malaguti replied that no precise directions had been yet given by authority for the employment of this salt in medical practice; but the largest dose usually administered internally was 5-6ths of a grain, and this amount was only reached by degrees, commencing by very

* There are no juries in the Royal Courts of France, which are in that respect similar to our courts of Chancery, &c. "They are composed of a president, several vice-presidents, some legal functionaries, and from twenty to sixty counsellors; they are almost exclusively courts of appeal from the courts of primary jurisdiction, and the tribunals of commerce."—(*McCulloch's Geographical, &c. Dictionary*, i., 861.)

small doses. For external use, applications, consisting of from two to four grains (three to five decigrammes), clothed in a proper vehicle, may be adopted with little if any previous preparation. In answer to other questions relative to the administration of the cyanuret in milk, M. Malaguti remarked that milk fresh from the cow had an alkaline reaction, and would, accordingly, affect in no way the poisonous influence of cyanuret of potassium; but that after standing for a short time, exposed to the air, milk underwent fermentation, and contained free lactic acid. In that state, added to a solution of cyanuret of potassium, it could set free hydrocyanic acid; but this, as is well known, is not less deleterious than the cyanuret itself, and the mixture would only be deprived of its toxicological effect by heating the milk to ebullition previous to its union with the solution, by which means a portion of the free hydrocyanic acid might be volatilised and driven off.

The advocate-general resolved upon what a French contemporary, the *Gazette des Hôpitaux* of Dec. 24th, calls *une application sévere de la loi*; "and the court, applying to the case of M. Macé the 52nd and 319th articles of the penal code, and the 104th article of the *code d'instruction criminelle*, repealed the decision of the tribunal of St. Malo, and condemned the physician to a fine of fifty francs, and three months' imprisonment at his own expense."

In this case, supposing the incompetence of the poisoner to engage in medical practice to have been indisputably proved, the verdict of a coroner's jury would probably have sent M. Macé to prison on a charge of manslaughter, when, perhaps, a less lenient sentence would have been passed on the culprit. We obtain in such cases as these a government estimate of the value of a life, if the party who kills *calis* himself "a physician;" namely, two pounds one shilling and eightpence, and three months' loss of liberty. To reduce the latter to a money value (English) is not easy. Recently, at the Old Bailey, one man who stole four pounds and a half of bacon was sentenced to six months' imprisonment, and another who stole a penny to ten years' transportation. By the rule employed in this latter case, M. Macé would have been shut up for eternity. Jurisprudence is as far from being an exact science as medicine,—at least in its application to practice.

Ulcers from Lying Still.—A German surgeon has found the following ointment of great utility for the ulcerations which infest patients who have lain long in an horizontal posture:—Cocoa-nut oil (*beurre de cacus*) and spermaceti, of each an ounce; yellow wax, half an ounce; acetate of lead, two drachms. Mix, and keep continually applied.

THE DIAGNOSIS IN SOME OBSCURE AFFECTIONS OF THE UTERUS.

M. Pereyra reports, in the "Journ. de Med. de Bordeaux," the case of a woman, fifty years of age, who, after having for a considerable time been afflicted with all the symptoms of uterine cancer, suddenly felt pass through and out of the vagina a bulky tumour, which it was found impossible to reduce. The tumour was of a yielding consistence, and moistened with a sanguinolent fluid: it was not painful on pressure. The finger introduced into the vagina was soon arrested by a *cul de sac*, and several surgeons, who were now called into consultation, considered the case one of retroversion of the uterus. While, however, they were deliberating about the remedial means to be employed the tumour sphacelated, and the patient died. At the autopsy the uterus was found occupying its natural situation, though its neck was elongated, and a tumour of a cancero-fungoid nature grew from the inferior extremity of the os tincæ. This growth was probably expelled beyond the vulva when, by its augmenting size, it had dilated the vagina to the utmost practicable extent. The "Gazette Medicale," Nov. 26, which quotes the above case, remarks, that the difficulty of distinguishing diseased growths from retroversion of the uterus is greater than might at first be supposed, and that the only way of attaining a correct diagnosis is to ascertain if the uterus be or not in its normal situation. Two methods are proposed for this end; either the fore-finger is introduced into the rectum, or a male catheter into the bladder, by the extremity of which instrument an exploratory process is conducted. The latter mode, treated of by Malgaigne (Thèse de Concours, 1833), requires, of course, some tact, but to the experienced surgeon it will give the more certain indication. In the case cited, indeed, a precise diagnosis was not absolutely necessary; for, whether fungus or retroverted uterus, as the tumour was manifestly carcinomatous, its peduncle should have been tied, or its excision immediately effected.

REMARKABLE MALFORMATION OF THE HEART.

A rare instance of imperfect development of this organ occurred in Paris in April last. A female child, four months old, was deposited at the Hôpital des Enfans Trouvés, of whom it was impossible to obtain any previous information. The child was seized with dyspnœa several times in the course of the succeeding day, the fits of which were accompanied with a bluish tinging of all the surface of the body, and it was accordingly sent to the infirmary. Here, on the ensuing

day, it presented general cyanosis; and the tongue, anus, genitals, and adjacent parts, were of a blackish-violet colour. Asphyxia supervened five or six times in the twenty-four hours. The pulse beat 136 times per minute, and a marked bellows-sound (bruit de soufflet) replaced the normal sound in the heart during its diastole. About ten days afterwards the child died of dyspnœa. On opening the thorax, nearly all its anterior half was found occupied by the pericardium; and on laying open this, it was seen that the heart consisted of only one ventricle and one auricle, the deep sulcus between which was filled with a process of the left lobe of the liver (with, of course, a portion of the diaphragm). The auricle, which was much larger than the ventricle, was nearly spherical, and its sides, which were about an eighth of an inch (two to three millimetres) in thickness, were formed internally by strong columnæ carneæ. At its posterior part the two venæ cavæ opened into it by a common mouth, or a sort of sinus, apparently a rudiment of a right auricle. The pulmonary veins terminated in their ordinary manner. The ventricle was of a conical shape; its walls were much thicker on its left than on its right side. Three openings existed in its base; the auriculo-ventricular, closed by a true mitral valve; the aortic opening; and, on the right side of the latter, an opening into a cylindrical sac, which seemed to represent the wanting ventricle, but had no communication with the auricle. The ductus arteriosus was wanting. There was no malformation in any of the viscera excepting the heart, nor in any part of the arterial system. —*Gaz. des Hopitaux*, Suppl., Dec. 1842.

AN ANTIDOTE TO ARSENIC.

The efficiency of the hydrated oxide of iron as an antidote for the poisonous effects of arsenious acid, has been tested in the following case, reported in the "Journ. de Chim. Med." for August of the last year:—M. Josse ordered an emollient mixture for a patient who was ill with tubercular phthisis, in its suppurative stage, attended with diarrhœa; for which mixture a packet of boluses, intended as poison for rats, was sent from the apothecary's in mistake. These boluses being found too large to be swallowed whole, one was divided, and a half taken. But a person present, fearful of some mistake having been committed, took occasion immediately to inform M. Josse, who presently ascertained that the patient must have taken sixty centigrammes, or ten grains, of arsenious acid. After white of egg had been administered, some means were employed to provoke vomiting; but these proved ineffectual. M. Josse now gave three ounces of hydrated tritoxide of iron, in a convenient vehicle, and with the happiest possible result, none of the usual symptoms of poisoning supervening. Forty-eight hours afterwards the patient passed a black-looking stool, and obstinate constipation lasted during many subsequent days; but no other inconvenient symptoms ensued, and the constipation not only had no permanently ill effects in the case in question, but was advantageous in causing the cessation, for a period, at least, of the diarrhœa. Let us remark here, that we should be on our guard against the ill effects due to some of the *bonbons*, or sugar-articles, with which many shops in London are stocked. Dr. Thierfelder, of Meissen, reports the case of a child, four years of age, who, after having eaten of some of those sweetmeats, representing French beans, was attacked by spasms, colic, vomitings of mucous and bilious matters, diarrhœa, and a great inflation of the abdomen. The child being, fortunately, of a strong constitution, recovered in a few days under the use of mucilaginous drinks, anodyne poultices, and a few other diluent and palliative remedies. But the effects might not have been so readily got rid of had the constitution been less able to resist disease; the sweetmeats were found on analysis to owe their green colour to arsenite of copper. Our readers will remember the attention paid to this subject in volume 2nd of THE LANCET for 1832.

THE LATE LADY DENBIGH.

Unfortunately for herself the poor lady had great faith in homœopathy. Her husband, too, was equally credulous as to the theories of Hahnemann. Although in her confinement eighteen months ago, she nearly lost her life by homœopathic treatment, her belief in it continued unshaken; and on again becoming pregnant recourse was had, as before, to the infinitesimal system. This lady was of a very plethoric habit, and, according to the accepted practice in similar cases, should have been carefully watched by her medical attendant during the whole period of gestation, and such means adopted as were likely to prevent any undue determination to the head during or preceding labour. Thus might have been prevented apoplexy or convulsions. But such treatment is against the principles of Hahnemann and his disciples, and therefore could not have been followed by the homœopathic attendants on this unhappy lady. As the period of her expected confinement drew near she was seized with convulsions; and, as a matter of course, their fractional grains and their globules had no sort of power to check them. Some time was lost in these fruitless attempts, and we all know the great value of even an hour in such cases. By accident a medical man of some eminence was in the house, and was requested to see the case; he pronounced the lady to be suf-

fering under puerperal convulsions, requiring the most energetic measures, and the assistance of a skilful accoucheur, to forward delivery. No, the homœopathic doctors spoke confidently, and the poor husband was not shaken in his faith of their skill. The infinitesimal remedies were alone used; the convulsions ran their course unchecked, and apoplectic coma followed!

These worthy gentlemen issued a bulletin when the patient was in this stage of the disease, and when she was, in all likelihood, past hope; when effusion must have commenced, and when no bleeding, no leeching, no purgative had been used.

"Friday, half-past nine, a.m., Lady—— had till nine o'clock last evening several very violent convulsive attacks. These have now yielded to the means employed, and there has been no return since two o'clock this morning. Her ladyship has, however, not yet recovered her senses.

"P. Curie, L.C.

"Harris Dunsford, M.D."

A note was written by one of the family at this juncture, speaking cheeringly of the opinion given in the bulletin. In this state of unconsciousness, and by the assistance, I understand, of the medical practitioner before alluded to, the patient gave birth to a child, and sank. The story is a melancholy one. Any tyro who had attended one course of midwifery lectures would have known every symptom in this case, and been able to determine on the necessary treatment. A story was circulated immediately after the event, that a fright occasioned the convulsions. This caused a fear of the coroner. The rumour was then changed, and a post-mortem examination was made:—

Report.—Softening of the brain; a large tumour; and more water than usual in the ventricles.—Who examined the head? Dr. Hahnemann's disciples! These facts need no further comment.—(M. D., in "Medical Gazette," Jan. 5th.)

*** Malibran died at Manchester in the hands of similar quacks. Those are expensive gentlemen who take lives and fees too. The death of Lady Denbigh occurred in the district of the coroner for Westminster. But of what use are investigations before *attorneys* in such cases, where the question is one purely of a *medical* character?

UNIVERSITY COLLEGE HOSPITAL.

TUMOUR OF THE THIGH.—AMPUTATION.—DEATH.—AUTOPSY.

M. W. was sent to this hospital July 8th, 1842, in order to undergo amputation of the right thigh on account of an enormous tumour, involving the knee of that side, which had followed a blow received fourteen years previously. The tumour is now of a large size, and appears to have originated in the lower end of the femur, though the patella and tibia are now involved in the morbid structure. The swelling is of a round shape, and quite hard; the parietes appear to be entirely osseous, with the exception of a small portion on the inner side, which is evidently of a membranous nature. The integuments bear the marks of the issues which have been employed with a view to the dispersion of the mass, but they are otherwise natural. The venous branches are enlarged, and ramify in distinct channels formed in the bony matter. The patient is distressed by constant pains in the affected part, but is otherwise in very good health.

10. The thigh was amputated this morning by the double-flap operation, and the bone was sawn rather higher than usual, on account of the disease having extended for some distance up the femur.

Upon examining the tumour after its removal, it was found to consist externally of an osseous shell, evidently formed by an expansion of the lower portion of the femur. This bony case was not of any great degree of thickness; it involved the lower end of the femur, the patella, and inner side of the head of the tibia, which were thus all connected together. There were channels upon various parts of its surface, in which the vessels and nerves had passed. The interior of the tumour was made up of membranous cysts, of various dimensions, filled, for the most part, with a serous-looking fluid, which became coagulated after about three hours' exposure to the air; some of the smaller cysts contained clots of blood.

20. The stump is healing very favourably; the patient had a severe attack of pleuritis a fortnight after the amputation had been performed; this was with difficulty subdued.

Sept. 23. Severe cough came on, accompanied with frothy expectoration; the pulse was frequent, small, and thready. The patient lost her appetite, gradually became worse, and ultimately expired on the 28th of September.

The Post-mortem Examination revealed the following appearances:—The line of cicatrix upon the stump was quite firm in nearly its whole extent; the saphena vein of this (the right side) was healthy; the femoral artery and vein were matted together with the surrounding tissues, and the inguinal glands were enlarged; the femoral vein bore evident marks of inflammation, and was lined by a layer of lymph. The same appearances were found in the external and common iliac veins; the arteries were healthy.

The femoral vein of the left side contained a coagulum, but was pervious in the centre; the external iliac vein was also occupied by coagulum as high as to the entrance of the internal iliac. From this point upwards there is a deposit of dense lymph lining and

obstructing the entire cava up to the point of entrance of the left renal vein. Above this the deposit is irregular, not covering the entire circumference of the vessel, but it ascends as high as to the junction of the hepatic veins with the cava.

The right renal vein enters the cava about two inches below the termination of the deposit of lymph, and a canal has been formed between this lymph and the inner coat of the vein, through which the blood appears to have passed, instead of by the natural channel. The renal vein of the left side also communicates with this passage, between the layer of lymph and the inner coat of the vena cava.

The ovarian veins of the left side are much enlarged, and terminate in the renal veins; the uterine veins are also greatly increased in size. In consequence of the total obstruction of the vena cava inferior, below the entrance of the renal veins, and the similar condition of the left common iliac vein, the blood returning from the lower extremities must have flowed through the internal iliac veins into the pelvic plexuses, and thence ascended by the ovarian veins into the cava. The hip-joint of the stump was filled with pus, and the cartilage covering the head of the femur was ulcerated near the origin of the ligamentum teres. The bone was ulcerated at the bottom of the cotyloid cavity. No purulent matter was found in any of the other joints, but an abscess had formed beneath the pectoral muscle of the left side.

The lungs were tolerably healthy; on the right side there was a large collection of purulent matter between the layers of the pleura, and the pleura costalis was lined by a false membrane.

Anatomy of a Monster.—M. Delbovier, of Liege, details an account of a monstrous development in a fœtal subject, eight months old. The abdomen, which was about a foot in length, from the xiphoid cartilage to the pubis, and twenty inches in circumference, was almost wholly occupied by the bladder. The anus was absent, and the rectum opened by a small orifice into the bladder, near its inferior fundus. Urethra nearly imperforate, and penis destitute of a corpus cavernosum. Left kidney hypertrophied, but right atrophied, and of a fibrous character. The liver, also atrophied, and compressed against the diaphragm, was reduced to a thin and flattened layer of a trefoil shape. Spleen small; pancreas wanting. Stomach very small, and intestines generally much reduced in diameter. The ileum was larger in its diameter than the colon; the cœcum and appendix vermiformis were the most largely developed portions of the intestinal canal.—*Gaz. des Hôpitaux*, Suppl., Oct.

THE LANCET.

London, Saturday, January 14, 1843.

The most important step which has been made by physiologists in the present day, consists in the substitution of more essentially practical, though more circumscribed, views of the nature of life, for the hypothesis of a "vital principle." Enlightened observers are now content, without peremptorily asserting or denying the existence of such a principle, to regard *vitality*, so far as vitality is known to us by its results, as residing in the capacity of a tissue, or structure, to react on the application of stimuli, each tissue that will so react having its appropriate stimulus, and its peculiar mode of reaction. In accordance with this view, the condition of the living organism has been recognised as one of perpetual *relation* to surrounding things, and, as a necessary consequence, a more active investigation has been pursued into the extraneous causes which influence that organism, and produce the phenomena of life.

Happily, this doctrine of life, or, rather, this summary of the actual amount of our knowledge respecting vitality, permits the most extensive and useful application of the facts observed, to questions of health and disease,—to hygiene and pathology; for certain surfaces of the living body are continually exposed to the operation of stimuli which are either naturally and intrinsically inappropriate to the parts affected, or are rendered so by the excessive or deficient proportion in which they are applied to the excitable tissues, and, hence, actions and effects ensue which are of an unhealthy character.

As a fact in pathology, this view was partially adopted before the physiological truth on which it rests had become orthodox in medicine. It was developed, to a certain extent, in that doctrine of pathological relation of which Abernethy and Broussais may be regarded as the chief founders. But

the observations of those teachers extended only to the operation of the extraneous causes of disease on the digestive, the respiratory, and the cutaneous surfaces, while parallel observations are as manifestly true with respect to all living surfaces that are exposed to the action of extraneous causes. Where morbific matters are absorbed into the blood, every texture of the body is exposed to their action, since there is no texture which that fluid does not permeate, in order to supply it with life and the materials of renovation. We mean not just now to discuss farther the etiology of disease. These remarks are merely introductory to a subject of vast importance, to illustrate which every intelligent practitioner of medicine has the power to contribute at least something.

We have remarked that the living body is constantly exposed to the influence of extraneous agents, according to the nature of which agents either the normal functions of the body are maintained, or some of those deviations from the regular state occur in it, which constitute disease. But the influences operating on the frame are not uniform in all localities, under all circumstances, and at all times. On the contrary, they vary in every age, and in every country; nay, almost in every district. Hence the necessity of carefully studying the effects produced on the public health by the moral, the social, and the political condition of the community, by the influence of arts and trades upon the mind and body, and by those circumstances which relate to the topography, and the physical geography, of particular localities. The last-named subject is one of incalculable importance, but has been grievously neglected, though susceptible of the most profitable investigation. Let us direct attention to it for a moment. It is an interesting fact that the view taken of the living body as regards its state of perpetual relation to external objects,—a view resulting in modern times from the facts observed in the advanced progress of medical science,—was perfectly familiar to the great father of our art. HIPPOCRATES held the doctrine that as many external causes of health and disease existed as there were extraneous substances capable of acting on the body of man, and varieties in his habits and circumstances. This idea pervades all his writings, and mixes with all his reasonings. In fact, on the subject of medical topography, he has left a regular treatise, in his book "De Aëre, Locis, et Aquis."

The more intense endemic influences, and the more remarkable relations of disease to locality, have forced themselves urgently on public attention, although their nature has for the most part eluded research. That a bundle of decayed leaves in a pool of water may generate a pestilence; that a rock, or even a wall, may set limits to the progress of a destructive miasm; and that a few feet of elevation may produce all the difference that exists between a salubrious and a deadly atmosphere, are facts of too striking a character to be overlooked; but it is probable that minor causes of disease, and of immunity from disease,—equally connected with local circumstances, and, in the long run, not less influential on health and life,—are perpetually operating, in every country, unheeded and unobserved. All practitioners who have given attention to these subjects must be aware that almost every district has its own minor endemic influences, by which the aspect of disease is modified; and the same holds good with respect to different parts of the same city. If every well-informed practitioner would make the local peculiarities of the district whether in town or country, in which his own practice chiefly lies, the subject of close and continued observation, in connection with prevalent diseases, and place his observations on record, a comparison of statements thus made, would eventually lead to results of a highly beneficial nature to the public, and might materially serve to correct erroneous theories in the practice of medicine. Similar records, handed down, from age to age, would, well digested, acquire a cumulative value, and illustrate in an important

manner those remarkable changes in the types of disease, in the same locality, which are well known to occur, but the causes of which are at present extremely obscure. Such an inquiry, if prosecuted at an early time, would probably have superseded much profound but futile speculation on the origins of maladies, and have confirmed the remark of BACON, that while men seek for truth at the bottom of a well, she is often to be found very near the surface.

Medical practitioners who reside in the open districts of the country, of all men, possess the best opportunities of marking peculiarities of the kind that we have named, and of noting the influence of physical causes upon health. Abroad at all hours and seasons, in every vicissitude of the atmosphere, and penetrating every by-way and corner of the kingdom, they only need exercise a moderate knowledge of natural science to place themselves in a condition to describe the physical geography of the spots that they visit, their profession rendering them peculiarly capable of bringing the subject into useful apposition with medicine. Let them keep this topic in view, not being discouraged at finding their notes meagre, and apparently inapplicable to useful purposes, at first. The commencement of almost every extensive process of induction, is attended by such feelings, but how wrong submission to them, and abandonment of the scientific pursuit would really have been become, at last, evident enough to those who, by perseverance, arrive at the means of comparing the facts recorded, and of deriving from them the great results that follow long and patiently conducted philosophic observations.

Essay on the Philosophy of Vitality, as contradistinguished from Chemical and Mechanical Philosophy. By MARTYN PAYNE, M.D. New York, 1842. 8vo.

IN this pamphlet, all that is doing, and all that has been done, in organic chemistry is characterised as being subversive of physiological science, and the labours of Liebig and his school are regarded, not merely as useless, but as pernicious also in their tendency.

Dr. Payne enrols himself as a champion of the *vital-principle* school, which principle he regards as an entity, *superadded* to organic beings after the creation of their structure; and his writings contain quotations in support and illustration of his creed, nearly as numerous as the verses in the books of the Chronicles. Now, physiologists of the present day are quite agreed that a "principle," or "agent," or "force," distinct from the ordinary forces of matter, is in operation in living bodies. But they do not consider that the inquiry into the nature and origin of the vital principle, or of other primary causes, comes within the legitimate bounds of physiological science. They entertain, however, a firm belief that *all* the phenomena which occur in living bodies are appropriate subjects of investigation. Not so Dr. Payne.

Dr. Payne informs us that influences are exerted upon the organic properties of living parts, that all agents make their impressions thereon, and that those properties are governed by immutable laws. Thus far we believe that he merely echoes the opinion of medical philosophers in general. But he insists upon our *not* studying the events which present themselves to observation; or, at least, that we shall make a very nice discrimination, recognising one series, and *rejecting* another. If, for instance, it shall turn out that starch is convertible into fat by abstracting oxygen from it, and that starch is, absolutely, thus converted into fat in the living system,—*that* is chemical, and what is chemical is a revival of the exploded doctrines of the iatro-chemical and iatro-mechanical philosophers:—

"An attempt to overthrow the experience of the past, and to obscure what is written in the most legible characters, and, as it were, in thousands of languages, upon the tablets of organic life, by a distorted construction of 'facts' which are yielded by test-glasses and crucibles, appears to me to be an enterprise which should alarm physiologists as to its pernicious consequences."—*Preface*, p. 6.

But the writer appears to entertain not only a philosophical disgust at any distortion or perversion of the truth, but a great abhorrence of the facts themselves. Thus, the following from that industrious book worm, Jonathan Pereira, is very unpalatable to him:—"In the present state of our knowledge we cannot explain the *modus medendi* of a large number of our best and most certain remedial agents." On the part of a philosopher who deals with "the soul," "a nervous

power," "a principle of instinct," "a vital principle," "a principle of irritability in the properties of life," the "*vis medicatrix*, or recuperative tendency," "sympathy," and "irritability," this is by no means surprising. Then, again, we find at p. 58:—"I have formerly endeavoured to indicate how derogatory to medical philosophy is the doctrine of operation by absorption,—how pernicious its practical tendencies,"—and it is, with Dr. P., the merest assumption that medicines injected into the veins will produce their remarkable effects upon the organism.

The following is the goal, on our arrival at which, according to Dr. Payne, we are to rest our weary selves, and be satisfied:—"All the results of morbific causes, as they vary from those which follow the ordinary stimuli of life, depend upon the mutability of the organic properties and actions" (p. 59); and, as we learn at a preceding page, "upon a continued succession of sympathies."

If it were not on account of Dr. Payne's evident distaste for facts, and a corresponding inaptitude for recognising them, the doctor would be amenable to the graver charge of a continued appeal to the *argumentum ad ignorantiam*. Thus, we are told, with reference to the preparations of iron, that it cannot be said "that the slight natural ratio belonging to the blood is increased." Most physiologists, and practitioners, also are fully convinced that the ratio of iron in the blood is increased by the use of iron, and that the ratio of the symptoms is proportionably decreased, in several aggravated forms of disease. But this is one of those pernicious facts which Dr. Payne repudiates.

If we are to reject all the facts, all the phenomena occurring in the living system, which admit of explanation upon known and acknowledged principles, then, as regards the "simple and immutable laws which govern the essential influences and changes that are exerted upon the organic properties of living parts," the question is, *how* are we to arrive at a knowledge of those laws? The American physicians must forego all claim to share in the *go-ahead* qualities of their fellow citizens, if they agree with Dr. Payne to stop at those thresholds of science which others safely pass, and which *all must pass*, sooner or later, at home or abroad, or resign their pretensions to a place in the modern throng of well-educated and competent practitioners of medicine.

THE BAT CLUB.

HOLE-IN-THE-WALL.

JANUARY 11, 1843.*

THERE was a smart attendance of the Committee at the appointed hour of assembling, with every promise of a brisk meeting, and Mr. PROVERB was the first to express "a hope," to almost every gentleman, as he entered the room, "that the pleasures of the evening would furnish a happy commencement of the new year." Amongst the first arrivals we noticed Sir B. BRODIE, Mr. MORGAN, Mr. ANDREWS, Mr. KEY, Mr. GREEN, Mr. VINCENT, Dr. SEYMOUR, Mr. TYRRELL, Dr. BRIGHT, Mr. KEATE, Dr. ADDISON, Dr. WATSON, and the Secretary,—

Mr. STANLEY, who had scarcely made his appearance when he stated that they would do well to avoid the delay in their proceedings which occurred at their last meeting. He would, therefore, at once propose that Sir B. Brodie be appointed to the chair of the Committee for that evening.

The motion having been seconded and carried, Sir Benjamin shifted his position to the seat of honour, and said that he would at once call upon the Secretary to proceed to the regular duties of the evening.

Mr. STANLEY said that they had no other official business to discharge than to appoint a chairman to preside over the general meeting of the club which was about to be held, and probably a better president could not be found than the hon. gentleman who was then occupying the chair. (Cries of "Hear, hear.") He would move, therefore, that Sir B. Brodie be the President of the general meeting which was to be held that night.

Dr. SEYMOUR had known his honourable and eminent colleague long and intimately, and he was proud to say that a man of purer worth and higher mental endowments could not be found in the profession. He cordially seconded the motion. (Carried *nem. con.*)

Sir B. BRODIE, in returning thanks, declared that he should endeavour to discharge his duty on the occasion with strict impartiality.

Mr. STANLEY again rose, and requested permission to call the attention of his brother committee-men to the fact that at the last general open meeting, from the time when Sir Henry Halford was voted into the chair to the close of the proceedings, the strange anomaly existed of there having been no motion before the assembly, or, in other words, no question submitted from the chair. It was an omission altogether contrary to the rules of the club, and, if it were drawn into

* There was so thin a meeting of the club on the 28th Dec., that the assembly adjourned until this evening.

a precedent, might produce much inconvenience. It certainly would have been impossible to take a vote on the merits of the subject which was then brought before the club in the lucid speech of Sir James Graham; but the irregularity of which he complained might have been avoided had it merely been moved "that Sir James Graham be now respectfully requested to explain to the club the leading principles and provisions of his Medical Reform Bill." Once put from the chair, after it had been duly seconded, Sir James could have stated the whole of his Bill, and the subject of discussion would have been perfectly regular, and in accordance with the laws of the society. He adverted to the irregularity, now because he was anxious to learn from the Committee whether it was the wish of the members that Drs. Webster and Hastings should be requested to state the views of the associations to which they belonged, thus following the mode of proceeding adopted at the last meeting with reference to Sir James Graham; or whether the Committee thought it more expedient that a motion should be first submitted to the club, and the Doctors then called upon to speak to the motion as put from the chair. If the Committee considered that the question should be submitted to the club as a motion, the form of that motion ought to be prepared without delay, and brought forward, substantively, as the resolution of the Committee.

Mr. LAWRENCE was of opinion that it would be better to follow the plan which was adopted on the last occasion. It succeeded admirably, and if it did involve a trifling deviation from the laws of the society, he thought that the importance and novelty of the occasion furnished a sufficient justification for the change. The excellence of the mode then adopted consisted in not allowing the meeting, by any previous discussion, to be diverted from the object which the Committee had in view, namely, that of hearing a distinguished minister of the Crown explain his intentions on the exceedingly important question of medical government, and the policy which the Cabinet would probably adopt in relation to it. Sir James, therefore, was simply called upon by the chair to speak; but, had a resolution been first proposed to the meeting, of whatever nature, however barren of materials, or destitute of subjects for comment, a strongly imaginative mind, like that of his honourable friend, the Secretary, might have made even such a meagre resolution the ground-work of an elaborate and eloquent speech. Others might have followed, and thus the time of the evening might have been wholly occupied without hearing the minister at all. He (Mr. L.) thought it preferable, therefore, that, following the example previously set, no motion should be submitted from the chair, but that Drs. Webster and Hastings should be called upon by the President to address the club, and state the views of the associations to which they respectively belonged. (Cries of "Hear, hear.")

Mr. STANLEY said that as the sense of the Committee appeared to be against submitting any motion from the chair at the meeting which was about to take place, he had nothing further to advance on the subject.

The PRESIDENT then stated that there was no other business for the Committee to transact, and he was therefore at liberty to forsake his post, and join with them in the general gossip of the day, until the hour for the meeting of the whole club should arrive.

Mr. KEY: Well, Sir Benjamin, what is the last professional gossip that has tickled your ear?

Sir BENJAMIN: I cannot say that I have been much *tickled* by the exposition, because such facts are calculated to produce very painful reflections, but my attention has been strongly excited by perusing the article entitled "A Warning to the Blind" which appeared in the last LANCET.

Mr. B. COOPER: Why, it is another Chabert affair! Prussic acid, too! Guthrie, what do you say to the doings of your friend? Are you not jealous of the blind-making manufactory in Russell-square?

Mr. GUTHRIE: If I were unaccustomed to your brusque manner, Cooper, I should not be best pleased at your calling Turnbull my friend. I hate quacks and quackery.

Mr. B. COOPER: How often are we deceived by *appearances!* I really always thought that you entertained a stronger love of self. Be that as it may, THE LANCET has rendered a most essential service to the profession and the community, by the exposition which it has made. I had often heard it said that Turnbull was a personal friend of the editor, and that notwithstanding the contiguity of Bedford and Russell-squares, there was at least one inhabitant in Bedford-square who would never be professionally acquainted with the tricks and manœuvres which were being practised in the neighbouring square. However, that journal has in this case given a further proof of its strict independence, and has furnished another practical refutation of a malicious calumny. Heaven knows, *I* owe it no thanks, but thus much is due to candour and to truth.

Dr. SEYMOUR: I really honour that Mr. Tipper who demanded the return of the fees, and succeeded in getting back the three five-pound notes.

Mr. KEY: He is well known to a friend of mine. He is a wholesale stationer in the city, and a most respectable man. I am informed that nothing could have induced him to undertake such a mission, but the strongest possible conviction of the wrongs which his friend, Mr. Humphries, had suffered.

Mr. B. Cooper: But that returning of fees is rather a dangerous example, though. How many fees would some of us keep if all the undeserved ones were refunded?

Dr. Roderick Macleod: That I think is a veery unprofeesional question, and savours mair of illiberality than wit.

Mr. B. Cooper: Say you so, doctor? Then tell me if you ever knew a physician who was always making a fuss about honesty and integrity, prescribe *bread-pills* for his patients, for months together?

Roderick: I have known it done with the best of motives.

Mr. B. Cooper: Without fees?

Roderick: That is another unprofeesional question, and I am na boond to answer it.

Mr. Lawrence: It is astonishing that Turnbull, who in his previous transactions had shown that he could play both a daring and a subtle game, should have stood self-convicted before Mr. Tipper and his patient, by returning the fifteen pounds.

Mr. Vincent: The man evidently has a conscience.

Sir Henry Halford: And there is such a thing as being conscience-stricken. Quackery is an abomination, and the miseries which it entails are innumerable.

Mr. B. Cooper: If Turnbull be conscience-stricken, he ought not to be without companions. But, Sir Henry, although I am no medical reformer, as you have been for many years at the head of the College, I should like to know what the institution over which you preside has down towards putting down quackery. I would offer a similar question to Sir Benjamin, and one also to my friend, Guthrie, who was lately president of the College of Surgeons. But, to make it as slightly offensive as possible, I will propose it generally, and ask what has either the College of Physicians or the College of Surgeons done to put down quacks or quackery?

No sooner had this question been propounded than all eyes were turned towards Sir Henry, Sir Benjamin, and Mr. Guthrie, who were staring with mute astonishment at each other. At last Sir Henry exclaimed, in a full volume of breath, and, with a throat expanding to its utmost stretch, "Well!—*That* is a question which I did not expect to hear from the lips of a member of the Committee of the Bat Club!—Well!—*That* from a member of the Committee!—Well!—I fear it is but too plain that the horrible principles of the medical reformers are forcing their way into the closet of the Conservative ranks. I consider that it would be undignified to continue this discussion."

Mr. B. Cooper: That is *your* answer to my question, Sir Henry. What say you, Sir Benjamin?

Sir Benjamin: Why, why, ah, why, really I cannot state that in the College of Surgeons we have done anything, specially with reference to quackery. (Several voices "Or *quacks*, Sir Benjamin; or quacks.") At the same time the whole Council—and I boldly declare it—have always admitted, willingly admitted, the magnitude of the evil.

Mr. B. Cooper: That is *your* answer, Sir Benjamin. Come Guthrie; *you*, I take it, will be more successful, you, the self-styled greatest medical reformer of the age; what is *your* reply to my question, namely, what has the College of Surgeons done, during the time that you have been a member of that institution, one of the Court of Examiners, and the President, to put down quacks and quackery?

Mr. Guthrie: I could answer the question easily enough, but I think your system of interrogation is becoming offensively personal, and therefore I decline to reply.

Mr. B. Cooper: Oh! and that is *your* answer, is it? No wonder we have reform medical associations springing up all over the kingdom, like mushrooms on a hot bed. I *will* say it; I don't care who is offended; it is a disgrace, a scandal, a black opprobrium, that the names of advertising quacks and nostrum-mongers, of every description, should be regularly printed with the names of all the respectable members, in the College books, and circulated amongst the public. Is that one of the efforts which you have made to put down quacks and quackery? No wonder the profession wants another system of medical government.

Mr. Key: I must say that it was the gross neglect of the College of Surgeons, with reference to quacks and quackery, which was mainly instrumental in making me attend the medical reform meetings that took place at the Freemasons' Tavern, in 1826.

Sir B. Brodie: You do not appear to understand the law. Had we excluded the names of the quacks from the College lists, we might have been subjected to actions for damages.

Mr. Lawrence: Undoubtedly, and have sustained heavy losses in our funds.

Mr. B. Cooper: Pitiful plea! The defence is, if possible, worse than the crime. What has become of the money? Do you not divide it amongst yourselves? So, then, rather than take less by a few pounds each than the members of the Council have pocketed, you would allow thousands of your professional brethren to be insulted, the public to be plundered, and a set of unprincipled quacks to glory in the triumph they have achieved over your fears? I begin to think that the reform associations are wholly right.

Mr. Guthrie: And *I* begin to think that there is treachery in the camp.

Mr. B. Cooper: There has been enough of it in the College, if the violation of oaths and the betrayal of interests which men were

sworn to support, can be received as evidence of such a fact.

Sir B. RRODIE: I do not see why the just exposure of Dr. Turnbull should have brought this ungracious attack on the College of Surgeons.

Mr. B. COOPER: If ungracious it is not ill-founded. Take another view of the question, then, and this phase of it is worthy the attention of three of the heads of our Colleges. Here is *Doctor* Turnbull, at the very portals of your institutions, practising surgery as well as medicine. I ask the President and the ex-President, is Dr. Turnbull a legally-qualified medical practitioner in this metropolis, and if he be not, what have the Colleges done to protect the pockets of the blind?

This question was put with unusual warmth, and a confused conversation arose amongst the Committee-men, the more sedate and prudent thinking, probably, that enough had been said on the subject. Sir HENRY HALFORD, amidst the murmurs, was heard excusing the conduct of the College of Physicians, and the action against Dr. Harrison, and explaining the expense of that action, and the poverty of the College, stating at the same time that he could unfeignedly assure the members of the Committee, and the whole profession, if they were present, that nothing could or would give him and his colleagues greater satisfaction than the enactment of a law to compel every medical practitioner and student in the empire to contribute to the exchequer of the College.

Sir B. BRODIE, Mr. GUTHRIE, and Mr. LAWRENCE, also, all three, asseverated that they, too, as well as their colleagues, would feel equally joyous if a similar law were enacted with reference to the coffers of *their* institution: and there the irregular conversation terminated, for just at that time it was announced that the club-room was nearly full of members, that the platform was half occupied, and that the hour for taking the chair had expired by some minutes. Considering that it was only an ordinary meeting the number of visitors in the club-room was large, and, in addition to the gentlemen whom we have already mentioned, we may state that there were present Dr. WEBSTER, Dr. HASTINGS, Dr. SHARPEY, Dr. BARLOW, Dr. ROBERT GRANT, Mr. WM. FARR, Mr. GRAINGER, Mr. WARDROP, Mr. CALLAWAY, Dr. CHAMBERS, Sir JAMES CLARK, Dr. FORBES, Dr. JAMES JOHNSON, Mr. SOLLY, Dr. HARRISON (of Dublin), and Mr. LISTON.

Sir B. BRODIE, on taking the chair, addressed the assembled club and visitors nearly as follows:—Gentlemen, having been selected by my colleagues to act in the honourable position of your President, I shall briefly explain to you the course of proceedings which we have marked out for our adoption. You will recollect that at the last meeting of the club* an exposition was made by a minister of the Crown of the more important principles and provisions of a Bill which he declared it was his intention, should he obtain the approbation of his colleagues, to introduce into Parliament, on the subject of medical reform. The statement which Sir James Graham made on that occasion was characterised by great perspicuity. It was impossible to misunderstand his meaning. All the more important provisions of the Bill were clearly and distinctly expounded. It was at a late hour of the night when Sir James concluded his address. The time for closing the sittings of the club had, in fact, arrived within a few minutes, which period was then occupied by the delivery of a brief speech from the prime minister, so that the proceedings at the meeting constituted an exposition rather than a debate,—an *exparte* statement,—and no argument was heard in opposition to any statement which the lawgiver had made. At a subsequent meeting of the committee of the club it was deemed advisable that the presidents of the two leading medical reform associations should be invited to attend the present meeting, for the purpose of delivering *their* opinions, and explaining the views of the thousands of members of the medical profession whom I am informed that they represent. I am happy to inform you that those gentlemen have accepted the invitation, and that Drs. Webster and Hastings are now seated by my side. The committee have proposed that those gentlemen should address you, and, following the example of Sir James Graham, present for your consideration the more striking features of any measure which, in their opinion, should be submitted to the Legislature on the question of medical reform. That you will hear them with patience and forbearance I need not entreat. However different may be your opinions, that spirit of toleration which the educated mind always displays will, I am sure, be extended to our respected visitors. When they have addressed you the whole subject will be before the club, and at our next meeting we may hope to enter into the debate, with a determination to be guided and governed in our arguments by an earnest desire to promote the public advantage. Before that meeting of the club is held the committee will assemble, as usual, and frame a resolution, having a direct reference to the provisions of Sir James Graham's Bill, in which the sense of the club will be taken. It is only right that I should also announce to you that any visitor may bring an amendment in his pocket, and submit it as a counter-resolution, and, in accordance with the usages of Parliament, the decision of the club will be first taken on the amendment. The members, also, on that occasion,

* Reported in LANCET, page 373.

will have the privilege of introducing the usual number of visitors. Before I sit down I may advert for one moment to an assertion which has been made, and often repeated, that the Bill of Sir James Graham was framed by me. I neither affirm nor deny the rumour at this time, and I refrain from stating whether I approve or disapprove of the principles of his measure. At another opportunity, and when we are in debate on the question, I shall respectfully state my opinions without reserve.—(Hear, hear.)—I now call upon

Dr. GEORGE WEBSTER, who immediately rose, and spoke as follows:—Mr. President and Gentlemen, I offer myself to your notice on this occasion fully impressed with the importance of the task which I have to execute, and my utter incompetence to do it full and complete justice. I require from you no small measure of forbearance, and I believe that your liberality will be unsparingly extended to me. That the opinions which I, and those whom I represent, entertain, are widely different from those of the majority of the club, I cannot doubt. That fact is painfully impressed upon my mind. I would that it were otherwise. It would be to me a source of satisfaction to be relieved from the necessity of attacking the conduct of any portion of my professional brethren, and the annoyance caused to me by such a task is greatly increased when I reflect on the circumstance that the persons whose proceedings I must strongly condemn are, many of them, honourably known in the annals of medical science. But wrongs are loud-tongued, and *will* make themselves heard. Injuries, too, may be so outrageously pressing and unjust that they cannot be borne quietly or submissively, excepting by natural-born slaves. Through the kind indulgence of the club I was present at the last meeting, and listened with the utmost attention to the speech of the Secretary of State for the Home Department. This is not the moment for expressing the conviction which it produced upon my feelings. This is not the moment for criticising the materials which composed that address, because our President has emphatically informed us that we are not now debating the subject of medical reform, but that you have assembled to listen to the statements which some thousands of medical reformers enthusiastically entertain, without having the opportunity of attempting to refute them. The body of which I have the honour of being president, and of whom I appear as the representative on this occasion, is the British Medical Association, a solid trunk out of which numerous flourishing branches have sprung. It was first established in the year 1836, and from that time to the present it has pursued one undeviating policy, and its proceedings have, throughout, been characterised by a strongly-marked principle of integrity. Our aim is the public good. We have no concealed intentions, no lurking sinister purpose, no narrow-minded selfish objects, and the members of the association desire to obtain no advantages for their efforts which shall not be shared fully and thoroughly by the great body of the profession. It would be useless and tedious to occupy your time with a complete history of the events which led to the organisation of our association and its numerous branches. These are too well known to the majority of my auditory. We felt that we were members of a profession which had no body, no sympathising head. There was no governing authority to redress the wrongs of which we were the victims, or to extend any protection to us in the exercise of our professional rights. We felt that the privileges which it was said we should enjoy, as the members of a distinguished profession, were to be found only in the sound of the words which conveyed the delusion to our minds. Mocked and insulted by every jack and buffoon in office; bearded by gangs of unprincipled and plundering quacks; obtaining no satisfactory response to our energetic appeals, when they were made to the colleges, halls, and companies, of which we were deceptively called Fellows, Members, and Licentiates; discovering that those persons who had been appointed under the law to protect our interests attended only to their own; finding that they who had been designed by the Legislature to guard and shield the public health by energetically promoting the cultivation of medical science, lost sight of every national and enlarged object in attending to their own narrow-minded and selfish views; we turned from such institutions with feelings of loathing and disgust, assured that men had little to expect from the exertions of others, if they would not make consistent and determined efforts to serve themselves. With minds forcibly occupied by such a conviction the founders of the British Medical Association proceeded to their work, and that they have pursued their labours with zeal and energy even their enemies must admit. After numerous meetings, repeated discussions, and a thorough investigation of the whole subject, they resolved that the medical government of this empire ought, in their opinion, to be regulated upon a principle and plan which I will now develop; and, having prepared a Bill which embodies them, it is their firm intention to submit that measure to the consideration of Parliament. Instead of a multitude of colleges and companies, exercising diversified powers and anomalous functions, they propose,—First. That all the legally-qualified members of the profession in the British dominions be united into One Faculty, to be entitled "The British Faculty of Medicine," or "The Faculty of Medicine of Great Britain and Ireland."

Sir HENRY HALFORD: Oh dear! Wakley's scheme!

Dr. WEBSTER: Secondly, that the members of that faculty shall elect periodically, in each country, by ballot, a governing body, to be called the "General Medical Senate," consisting of a council acting in London, Edinburgh, and Dublin. Thirdly. That these three national councils of England, Scotland, and Ireland, thus elected, shall each be subject to the same regulations, and meet from time to time, to consult together, and act *unitedly* as the general medical senate, in framing all necessary laws for the internal government and protection of the whole faculty. Fourthly. That this general medical senate shall, with members appointed by the Crown, alone have power to frame and promulgate all necessary by-laws, for regulating the said faculty as a body; for defending the respective rights of the members; for superintending the medical police of the country, making regulations respecting quackery and the sale of patent medicines and poisonous substances, and for advising the government on all subjects connected with the public health. Fifthly. That the councils or boards of the existing medical corporate bodies in England, Scotland, and Ireland, shall be invited to take part in the formation of the first general medical senate. Sixthly. That all future candidates for medical practice shall be examined by a board elected as the general senate may determine. Seventhly. That an uniform and high qualification in professional education shall be required of all the candidates, at one or more public examinations, theoretical and practical. Eighthly. That all admitted members of the faculty shall receive the same title in medicine, and enjoy equal rights and privileges; and alone have the power to practise medicine in the British dominions. Ninthly. That to all chemists and druggists the title of apothecary shall henceforth be limited, and that all future chemists and druggists shall undergo a suitable examination before a board appointed by the general senate of the medical faculty, and be licensed accordingly. Finally. That registers of all persons who may legally practise the healing art, shall be kept in each of the three kingdoms, by the respective councils of those kingdoms, as also registers of all licensed chemists and druggists, and that these shall become public documents, to be referred to in order to establish the legality of such persons as medical practitioners or chemists and druggists. There are other details, Gentlemen, which it cannot be necessary now to explain. Those, however, that I have given, constitute the leading features of the plan which the British Medical Association has adopted, and which it is determined shall be submitted to the attention of Parliament. Some of them you may deem unimportant, but whatever may be thought of the minor portions of the scheme, it is, I believe, impossible to over-estimate the value of the principle of *representation* which the system that I have propounded embodies. In the medical institutions as they now exist, the profession can exercise no influence. Elected *for life*, and *irresponsible*, the councils and boards of those establishments exhibit the utmost apathy whenever they are addressed on the subject of medical grievances. From them, as they are now constituted, the members of the profession may receive courtesy, but no useful sympathy with their wants, and the arm of the law is never raised by the authorities in the colleges to vindicate the rights which the individual members of the profession ought to be enabled to exercise without stint or restraint. The names of the most offensive quacks are permitted by them to stand in juxta-position with those of the most highly-gifted members of our fraternity, in the catalogues which are annually issued by the councils. Thus, the public are bewildered, and know not how to distinguish between the honourable and high-minded members of our profession, and those low-minded and debased creatures whose whole career consists of unprincipled contrivances for practising extortions, and playing with the fears of the timid and afflicted portions of the community. Individual protection, Gentlemen, there is none, and the moment that a member of the College of Surgeons has paid for his diploma, the council of that institution seem to feel that every legal, honourable, and moral tie between him and them is for ever dissolved.—(Hear, hear, hear, and loud cheers, from many parts of the room.)—The case is no better with the Company of Apothecaries. Although unlicensed pretenders to medical skill are to be found in every district of the kingdom, carrying on their nefarious proceedings with the utmost effrontery, not one out of every hundred of them receive the slightest molestation from the Worshipful Society. Can such a state of things be permitted to last? There are, probably, in the United Kingdom upwards of twenty-five thousand medical practitioners, and I fearlessly assert that considerably more than twenty thousand of that number feel that they are aggrieved, injured, persecuted men.—(Hear, hear, hear.)—After having most patiently investigated the *sources* of our wrongs, the *causes* of the numerous disasters which have beset us, and the weakness which we exhibit, as a professional body, on all national questions, the members of the British Medical Association have deliberately resolved,—and it is a resolution which has been made known to the Government,—that there exists no mode of placing medical interests upon a proper foundation, but that of establishing a system of government which shall be sustained by *the principle of* REPRESENTATION.—(Repeated cheers from various quarters, and some cries

of "Oh! oh!" from others.)—Acting under the influence of that conviction every detail of the Bill has been framed in accordance with the principle I have named. At the proper time, and in debate, I will endeavour to show how such a system would work for the public advantage, and I will then call upon the opponents of the scheme now propounded, to prove in what manner a representative system of government in the medical body could injuriously affect *any* portion of the community, *any* public or private interest, with the exception of those interests that are fostered by the monopolies which it is designed to overthrow. Educated as medical men are, pursuing the highest objects in their professional duties, devoting all their time and attention to the mitigation of human suffering, and to extending the term of human life,—mixing in the first ranks of society, and often obtaining, by their individual exertions, the esteem and respect of the most exalted people in the empire, I consider that the claims of such an assemblage of men to be united into *one body politic*, managing, directing, and controlling its own internal government, would be altogether irresistible; and, Gentlemen, I boldly state to you that the association to which I have the honour to belong will vigilantly prosecute those just and philosophical objects until they are successfully accomplished.

At the conclusion of this address the learned doctor was greeted with very considerable applause, much more, in fact, than he had a right to expect from such an assembly.

The PRESIDENT then announcing the name of the next speaker,

Dr. HASTINGS, of Worcester, rose, and proceeded thus:—I felt greatly honoured, Sir, by the invitation which I received to attend the meeting of your distinguished club. At the same time I must say that I think it was conveyed to me under some misapprehension of the nature and principles of the association to which I belong. Our honourable Chairman termed me this evening the president of that society, but I cannot lay claim to that distinction, occupying only the humble station of Secretary. The error may have arisen from the circumstance of my having had the good fortune to be the founder of the association.—(Hear, hear.)—Your worthy President also designated our institution as one of the *Reform* associations,—at least, I—that is to say—there is, in fact,—really, Gentlemen, I feel somewhat embarrassed at being called upon to explain views which I never entertained. I assure you I have never willingly assumed the character of a reformer. In this club I hope I may speak without reserve, and free from any fear that what I say will be read or repeated elsewhere. (Cries of "Undoubtedly.") I may state, then, that the Provincial Medical Association was established for the purpose of promoting and cementing feelings of fellowship between physicians and the subordinate general practitioners. It did appear to me, and some others of my own rank in the profession, that we ought not to keep so much aloof in society from men whom we were sometimes obliged to meet in consultation; and we felt, too, that our own interests might be promoted by associating with them at least once in every year, and holding out, on such an occasion, the hand of friendship to practitioners who did not occupy the same elevated position as ourselves—persons who had obtained neither titles nor university honours.—(Hear, hear.) The project was a new one. It succeeded admirably at first, and we easily obtained annual subscriptions of a guinea each from nearly a thousand members. Our migratory periodical festivals were well attended, and the unworthy individual who is now addressing you was signally honoured at every anniversary dinner. Five years had we proceeded in our career before the spirit of discontent broke in upon us. For five years did I and the other founders of the institution succeed in staving off the question of medical reform. At length, in an evil hour, it was entertained, when, in order to get rid of such a *vexata questio*, such a *casus belli*, such a source of strife and contention, it was proposed that we should at once go beyond the British Medical Association, that, in a word, we should swallow the whole hog, and present a petition to Parliament praying for the destruction of *all* the medical corporations, thus raising every possible interest in opposition to the proceedings of the *bonâ fide* medical reformers.

Mr. LAWRENCE: the snare was ingeniously contrived.

Dr. HASTINGS: Yes, it succeeded admirably, and the British Association, and several of its branches, were more or less entangled by it.—(Hear, hear.)—But I now candidly confess to you, Gentlemen, that I had no plan of medical reform to propose. (Loud laughter.) In fact, I am *not* a friend to the abolition of distinctions in the profession. I am *not* the advocate of uniformity of title. I think that the superiority of the grade to which I belong confers honour and dignity on the profession, and approximates it, generally, to the ranks of the aristocracy. I feel with regret, however, that we cannot maintain our position much longer. Our association is in a tumult on the subject of medical reform. The yearly subscriptions are not paid, and the evidence of dissension becomes more apparent every day. We endeavoured to give importance to the association by setting up a journal to honour the council, and laud the annual meetings, and by a peculiar arrangement, a copy of it is sent, weekly, to each member, though I candidly acknowledge that even that scheme has proved a failure. At the last anniversary

meeting nearly one-third of the amount of the annual subscriptions remained unpaid. The journal does not sell, and Mr. Renshaw, the publisher, has had the folly to declare in a more public place than this, that, the concern being overwhelmed with debt, he should soon desert it. Indeed, for myself, I may say that I shall not now, I think, regret its discontinuance, as it has evidently been disadvantageous to us, producing numerous complaints of its intrinsic dulness, the stupid and idle manner in which it is conducted, and the general absence from its pages of useful communications, creating a feeling amongst the members that the funds of the association are improperly bestowed in attempting to continue its existence; but as the price paid by the association for each number is only about the value of the paper, I do not think that that complaint is well founded.—(Cries of "Question.")—Yes, I fear I am wandering, but, Gentlemen, really I have, in fact, nothing to say, no medical-reform views to disclose; I have only to thank the Committee for inviting me here. I fear that the Provincial Association *will* become a reform society.—(Hear, hear.)—*That* I *do* fear, as the levellers in it are getting vociferous, and one of them, in writing to me a few days since, was so grossly impertinent as to call the journal "my puffing advertiser," desiring that "no more such rubbish might be sent to him," adding, that he would neither pay up his arrears, nor ever hand over a new subscription to the association. I state these things in confidence, Mr. President, and, thanking you sincerely for your kindness, and again declaring that, whatever other persons may be, *I* am no medical reformer, I trust that not a word I have spoken will be repeated out of this room, and so respectfully take my leave. I beg pardon, Gentlemen, I really had nothing to say on the subject discussed by my friend, Dr. Webster—

The impatience of the meeting began to exhibit itself within a few minutes after Dr. Hastings commenced his rigmarole, and the murmurs at last became so loud and general, that he stopped abruptly, apparently fully admonished that the members were tired of his discourse.

The PRESIDENT then stated that he had been most gratified with the address of Dr. Webster. It was frank, manly, bold, and clear. The principles and scheme which he had propounded in it were readily comprehensible. Their practical merits he should not then discuss, nor should he offer any commentary on the speech, or, rather, the story related by Dr. Hastings, because it was quite clear that the invitation sent to that gentleman had originated in a misconception. The club had now different schemes of medical reform before it, and at their next meeting the merits of the two plans would be argumentatively debated, on a resolution, or a string of resolutions, to be submitted from the chair. He hoped that on that occasion, as during the present meeting, the same kindly feelings would prevail. The hour for separating had now arrived.

The club then broke up, the members generally expressing their approbation of the tone and temper of Dr. Webster's address, although it was quite evident that the principles which he had enunciated would not be supported by more than an inconsiderable minority of the members.

MEDICAL SOCIETY OF LONDON.

CALCULI AND SCROFULA IN CHILDREN.

DEC. 19, 1842.—Dr. RISDON BENNETT this evening mentioned a case which he had brought before the society during the discussion on Mr. Crisp's case of urinary calculi (see LANCET, page 355), to which it bore a great similarity, both with reference to the amount of emaciation and the presence of calculi. He (Dr. B.) had then stated that he believed these cases were almost always connected with scrofula, and this case fully bore him out in that opinion, for the lungs and the bronchial and the mesenteric glands were studded with tubercular deposit. In this case, also, as in that of Mr. Crisp, the disease was confined to one kidney, and the calculous deposit was found in that organ only.

SLEEPLESSNESS AND ITS CURE.

Dr. CLUTTERBUCK begged for information on the production of sleep at will. He was subject to restless nights, and was anxious to be acquainted with a plan which had made some noise in the world, its teacher being dead, and the promises of his patients not to unfold his secret being no longer sacred.

Dr. JOHNSON said that Mr, Gardner's "secret" had lately been published, and might be characterised by the one word, *humbug*. Gardner had mentioned the plan to him, but he refused to keep it secret;* but when he (Dr. J.) tried the plan it kept him awake. The patient was to lie on one side, take a deep inspiration, and then breathe slowly in and out until you fancied you saw the breath passing out of the nostrils, &c. (See LANCET, page 142.)

Mr. PROCTOR said, that hard work would produce sleep, but it could not be forced. When an Act of Parliament was passed some years since to compel the watchmen to sleep in the day-time, it was found to be impossible to carry the order into effect.

Dr. JOHNSON said, that hard work would not always procure sleep. Those who indulged most in sleep often slept the most. Moderate exercise, good health, no suppers,

* He offered to communicate it to THE LANCET, but the gratuity was declined.

or only suppers which were easily digested, were generally accompanied by good nights. If these did not succeed, then Dr. Elliotson should be consulted.

Mr. DENDY was pestered to visit Mr. Gardner, who then told him the "secret," but under no promise of secrecy. He agreed that humbug characterised the professions on the subject, but he thought there was something in the *practice*, and that that something depended on monotony. So there was something in mesmerism, but the *professions* respecting it were also carried to a ludicrous extent. Mr. Gardner failed in ninety-five cases out of a hundred on which he tried his system. He succeeded with it, however, on several eminent men, but the whole effect was attributable to monotony.

A MEMBER inquired whether Dr. Clutterbuck had tried coffee. A case was related in that society some years since in which long protracted insomnolence had been overcome by a Hahnemannic dose of coffee, when all other means had failed.

Dr. CLUTTERBUCK had always found coffee keep him awake.

Dr. L. STEWART knew a lady whose sleeplessness was always removed by a cup of strong tea.

Mr. PROCTOR considered that sleep was produced by a kind of feverish condition. Over-eating or drinking produced sleep. If a person arose when sleepless, and took anything, and so changed his train of thoughts, he would then get to sleep.

Dr. BENNETT remarked, that thinking kept persons awake, but by breaking the train of thought sleep would supervene. He had found that he could not sleep when he had sat up till morning, and overworked his brain by one train of study. If he stopped up beyond that, and changed his thoughts with a volume of Shakespeare, for instance, he could then sleep soundly. If a person wished to study much, he should change the subject of meditation.

Dr. ALISON: The observations of Dr. Bennett refer rather to mental than bodily causes of sleeplessness.

Dr. WILLSHIRE said, that the influence of periodicity of action in the production of sleep had been overlooked. This influence was exemplified in the regular action of the bowels. If the same principle were applied with regard to sleep, he believed that sleep would come on.

Mr. LINNECAR: Yes, if the body were healthy, but sleepless patients are not in a natural condition. He agreed with Dr. Bennett that the predominant chain of ideas should be broken where sleeplessness followed over-study, for when Franklin could not sleep he usually got out of bed and exposed himself to what he called an "air-bath" until he was cold. He then returned to bed and slept, thus substituting a corporeal for a mental impression.

A MEMBER questioned if Dr. Franklin did not take his air-bath to keep himself awake for study. He agreed that monotony might produce sleep. Boerhaave produced sleep in a patient when all drugs had failed, by allowing water to drop constantly upon a brass pan placed near his head.

Dr. WILLSHIRE said, that cold produced sleep. The soldiers of Terra del Fuego could not resist sleep, though warned of its fatality.

Mr. DENDY: Moderate cold kept persons awake; it was intense cold that produced sleep. Strong minds seemed to possess an influence even over sleep. The Duke of Wellington, Bonaparte, and Alfred the Great, slept when they pleased; the latter it was well known devoted four hours of the twenty-four to slumber. What produced sleep in one person failed in another.

Dr. WILLSHIRE: The French soldiers in the Russian campaign actually walked in their sleep.

Mr. DENDY: They slept in their walk, and did not walk in their sleep, two very different things.

Dr. THEOPHILUS THOMPSON alluded to certain conditions of the stomach which prevented sleep; two in particular had this influence, namely, emptiness with acidity, when the mastication and swallowing of a bit of biscuit, or a little carbonate of soda in water, would produce sleep. An over-full stomach was another cause of sleeplessness.

Dr. WILLSHIRE: The Siberian hunters, when hungry and tired, tie a band tightly round their stomachs to produce sleep.

Dr. STEWART had personally experienced, on a journey, the impossibility of sleeping after a very long watchfulness.

The PRESIDENT (Mr. Pilcher) said, that so long as we obtained a certain amount of sleep it did not much signify when it was taken: the effect of habit and periodicity, however, was very great. Thus, in the manufacturing districts, the masters occasionally changed the men from day to night-work, and from night to day-work, but the practice proved to produce illness and shortness of life, by interfering with sleep. If the men remained entirely at one duty or the other the same bad results followed. He knew of a mail-coachman who, if kept up by day, could not sleep at night. Regarding the quantity of sleep, it had been found that eight hours sleep at one time afforded more refreshment than twice four hours taken at different periods.

Dr. ALISON had found that the colliers, who were accustomed to work at night, could not sleep excepting by day. A glass of cold water would often produce sleep in himself when he was wakeful at night.

Dr. THOMPSON alluded to a cause of confused intellect coming on after dinner, depending on the want of the usual quantity of

sleep, and cured by sleeping the usual time.

A MEMBER had found that the police did not bear a change from night duty to day-duty, in consequence of its interference with sleep.

(A speculum-lamp was shown by Mr. Miller, of Piccadilly, a neat and ingenious apparatus; a small reflector throws the light up the tube.)

UNIVERSITY OF LONDON.

THE senate, at its sittings on the 21st ult., conferred the following degrees and honours in medicine:—

DOCTOR OF MEDICINE.—*First Division.*

William Allen Miller, King's College.*
William Paley, London Hospital.
Richard Quain, University College.†
David Unwin, University College.

Second Division.

Prior Purvis, St. Thomas's Hospital.

DOCTOR OF MEDICINE.

Examination for Honours.—Medicine.

Richard Quain (gold medal), University College.

BACHELOR OF MEDICINE.—*First Division.*

John Travis Dunn, Guy's Hospital.
James Ellison, St. Bartholomew's Hosp.
Alfred Baring Garrod, University College.
John Hudson, Leeds, and University Coll.
Thomas Inman, King's College.
William Jenner, University College.
George Johnson, King's College.
John C. Laugmore, London Hospital.
Henry Letheby, Aldersgate.
John W. C. Pennell, Guy's Hospital.
William A. Raper, University College.
James Russell, King's College.
Joseph G. Swayne, Bristol, and Guy's Hospital.
William H. Williams, University College.

Second Division.

George Crutch, St. George's Hospital.
John H. Davis, University College.
Arthur Hadwen, University College.
John Randall, Aldersgate, and St. Bartholomew's Hospital.
F. R. Spackman, Middlesex Hospital.

EXAMINATION FOR HONOURS.

(The names are arranged in the order of proficiency in each subject.)

Physiology and Comparative Anatomy.

George Johnson (scholarship and gold medal), King's College.
John Travis Dunn (gold medal), Guy's Hospital.
J. W. C. Pennell, Guy's Hospital.
W. H. Williams, University College.

Surgery.

J. W. C. Pennell (gold medal), Guy's Hospital. (1)
James Russell, King's College. } (2)
J. G. Swayne, Guy's Hospital. }
J. T. Dunn, Guy's Hospital.
Thomas Inman, King's College.

Medicine.

A. B. Garrod (gold medal), Univ. Coll.
J. G. Swayne (gold medal), Guy's Hosp.
George Johnson, King's College.
J. T. Dunn, Guy's Hospital.
Thomas Inman, King's College.
J. W. C. Pennell, Guy's Hospital.

Midwifery.

J. G. Swayne (gold medal), Guy's Hosp.

The examination papers for the degree of M.B. have already appeared in THE LANCET. We do not think it necessary to publish any others, as they all are more or less alike in their general character, and those who are interested with regard to them can readily procure them of the medical publishers. We subjoin, however, the case which was selected as a subject of commentary, an object of more interest to our readers generally.

DOCTOR OF MEDICINE. — PASS EXAMINATION, 1842.—*Commentary on a Case in Medicine.*

Case proposed.—A man, twenty-five years of age, who had previously enjoyed good health, suddenly complained of violent palpitations of the heart, with difficulty of breathing and fever. He was bled several times, by which, and other measures, the palpitation ceased, and the dyspnœa was so much relieved that he voluntarily left the hospital. Some time afterwards he again applied for admission. He did *not* then complain of palpitation, and could *lie* in any position: auscultation detected only extreme frequency in the action of the heart, but no pulmonary lesion; the pulse was 140, regular, and of the ordinary strength; the skin was cool, the lower extremities slightly infiltrated; the abdomen soon began to enlarge, the face became œdematous, the breathing embarrassed, and the infiltration of the extremities and ascites increased. On percussing the thorax, the posterior part of the left side of the chest emitted a dull sound, and over that space the respiratory murmur was absent. From this period the strength rapidly declined, diar-

* A certificate of special proficiency in medicine was awarded to Dr. Miller.

† A similar certificate, and a gold medal, for a "commentary on a case in medicine," were awarded to Dr. Quain at this examination.

rhœa supervened, and he died in a few days afterwards,

What was the nature of this disease? What morbid appearances would you expect to find *post mortem*? Detail the treatment you would have adopted.

MESSRS. JERDAN AND CHAMBERS.

To the Editor.—Sir: I have read with profound indignation and disgust the *exposé* in the last number of THE LANCET of the nefarious proceedings of Dr. Turnbull, for which, not only the profession, but the public at large, owe a debt of gratitude to the gentlemen who have come forward to expose such conduct, and to you, Sir, for publishing it. The "Literary Gazette," and several of the publications of Messrs. Chambers, of Edinburgh, have from time to time contained articles, couched in the strongest terms, eulogising Dr. Turnbull, and holding up to public admiration his peculiar treatment, the great advantage of which was said to be that he could, and did, cure cataract *without an operation*. What should be done when journalists, upon the most positive evidence, are convicted of the grossest deceit, of most scandalous ignorance, and of aiding grasping avarice, in matters which they have ventured to discuss, and especially upon occasions when they do so to the injury of honest and really skilful surgeons? If, Sir, those persons have the least regard for their character, or the smallest feeling of respect for honourable conduct, they will at once recall their former declarations, admit that they have been imposed on, and circulate the antidote as widely as they have disseminated the poison. Trusting that you, Sir, will not let the matter drop, I am, your obedient servant,

AN OPHTHALMIC SURGEON.

Jan. 9, 1843.

BORDEAUX PRIZE FOR AN ESSAY.

To the Editor of THE LANCET.

Sir,—I have been requested to forward to you the accompanying "PROGRAMME"* from the Medical Society of Bordeaux, who desire to make known their intention of giving a gold medal of the value of 600 f.s. (£24) to the author of the best essay on the following subject:—

"What is the influence of the penitentiary systems, and of solitary confinement in particular, on the health of prisoners, both in a physical and a moral point of view."

Papers to be forwarded to the Secretary, Mr. Burguet, Rue Fondaudège, No. 67, Bordeaux (post free), *before* the 15th of June, 1843, written either in the Latin, French, Italian, English, or German language. I am, Sir, your obedient servant,

C. HOLLAND, M.D.

16, Queen-street, May-fair,
Jan. 12, 1843.

* Programme des Prix de la Société de Médicine de Bordeaux. (Séance publique annuelle du 19 Nov., 1842.) Bordeaux: Hy. Faye, 1842. Pp. 20.

GALL'S RUBBISH.—A wiseacre, named David Leslie, of Armagh, prints "a few sentiments on phrenology" in the "Dublin Medical Press," of Jan. 4th, in which he thus sums and sets at rest the entire question:—"The whole philosophy of Gall consists in substituting multiplicity for physical and psychical unity. He divides the unity of mind into twenty-seven little minds; he divides the cerebral mass into twenty-seven little brains. Thus he destroys the unity of entity. Each organ must have its volition, its choice, in fact, its moral entity, thus destroying the unity of mind."—This perspicuous definition and fatal blow at phrenology is introduced to the reader with the following description of Mr. Muddlehead's whole paper, which we copy verbatim from his note:—"The article is too brief to be clear. However, brevity is the safest side to err on."

THE PERIODIC LITERATURE OF THE MEDICAL WORLD furnishes, daily, new facts, valuable observations, curious and anomalous forms of disease, improved methods of treatment and diagnosis, and thus becomes, to the practical and reading physician, more valuable as a reference than any strictly systematic book ever can hope to be. The numerous periodicals published in England and on the continent contain the accumulated experience and practical observations of a great number of observant medical men, on diseases, no doubt accurately described before, but also on many new and singular forms, thus furnishing cases of reference, and guides for our own especial practice. Such works are of inestimable value for the diffusion of sound medical knowledge. The periodicals are likewise indirectly useful by affording us the stimulus to seek improvement by adding our quota to the general stock of useful information through them. By their courtesy in inserting our lucubrations they stimulate us to work, to observe, and to record facts which otherwise would be lost. Our leisure is thus spent in a most interesting and profitable manner to ourselves, while, peradventure, we communicate facts worthy of the attention of our profession; our minds are, at the same time enlarged and usefully disciplined by the references we are obliged to make to the highest authorities; by their being written, facts of the greatest value are accumulated in the memory; the intellect is educated to habits of reflection; and the

highest faculties, instead of lying dormant, are called upon to reason, to analyse, and to compare.—*Dr. S. P. Evans, Dub. Jour.*, Jan. 4th.

ROYAL COLLEGE OF SURGEONS IN LONDON.

List of gentlemen admitted members on Friday, January 6, 1843: R. J. Mack, K. Kittoe, J. H. Wilmot, J. Virtue, L. Fowle, R. A. Varicas, C. R. Francis, W. H. Walker.

NEWS AND CORRESPONDENCE.

To the Editor.—Sir: The Council of the Royal College of Surgeons issued a proclamation, some few months ago, stating that all diplomas bearing signs of any "alterations and erasures" must be considered as forgeries. Now, in my diploma, bearing the date of August, 1839, there is an erasure caused by the Secretary neglecting to spell my Christian name correctly; on my remarking the circumstance to him, at the time, he exclaimed that it was not of the least consequence, and wrote my name in full on the margin of the diploma, with his signature attached. Having soon to present my diploma before a board of guardians, I applied to the Secretary for a new diploma, but he still persists in saying that "it is of no consequence." Perhaps, the fact is that he does not like paying the expense of a stamp for his own error. Should I petition the Court, and what cost should I incur? Your obedient servant, A Subscriber.—Jan. 3, 1843. **** An application on the subject to the Court of Examiners would not be attended with any expense.

Sir,—Mr. Nussey, before the Parliamentary committee in 1834 (Lancet, 1835-6, vol. ii., p. 488), intimated that the Apothecaries' Company had then conceded their licence to University graduates without subjecting them to *examination*; and he gave various reasons for their so doing. I am a graduate of Glasgow, for many years in general practice. I do not think the Company will prosecute me, but I occasionally meet with a practitioner who refuses me the usual medical courtesies from my not having an apothecary's licence; or a patient who is willing to offer this as an objection to paying my bill. The medical reform so long expected seems still far distant, and I wish to remove my disqualification. Can my object be obtained in the manner stated by Mr. Nussey? Your most obedient servant, M.D.—Jan. 4, 1843. **** Mr. Nussey must have given incorrect information. Probably what he intended saying was that the Board had examined some Scotch graduates who did not possess any indentures of apprenticeship.

The letters of *Mr. W. Simpson* and *Dr. Dickson* were put into type for publication this week, so was that of *Mr. Davey*, but the distribution of papers to various medical journals imparts to such papers the character of hand-bills, and we, therefore, always endeavour to save them from appearances which may be false, by excluding them from our columns.

Spiritus Terebinthinæ.—The profession are solicited, by *Mr. J. H. Horne*, to try twenty-drop doses, on sugar, of the spiritus terebinthinæ, in phthisis, given three times a day. The remedy (he says) was suggested to him unconditionally, but backed by the successful cure of three successive cases. Its merits are becoming daily more known as of great value in various diseases.

Castigator.—Circulars and hand-bills similar to those of the Messrs. Sutton are so frequent in the profession that our journal might easily be filled with reprints of them. The council of the college never attempt to expel such advertisers, and could not, even if they would.

Mr. Ed. West.—Periodicals not appertaining to medicine are announced in this journal only on the cover.

Stephenus.—We are not acquainted with the terms of the keepers of the asylums. The newspapers, however, frequently contain their advertisements, and letters addressed to them would elicit some information on the subject, or an advertisement might be inserted by our correspondent.

The paper of *Mr. Ross* was received and shall be inserted.

Inquirer.—Mr. Abernethy died on the 18th of April, 1831.

A Med. Student.—The company has no charter, but conducts its operations under an Act of Parliament, which contains no express term of expiry.

Ignotus.—He may legally act as an apothecary, but however eligible in that respect as a medical practitioner, he would not be re-appointed to the office without a relaxation of the regulation of the commissioners.

We will endeavour to insert in an early number the cases and communications of *Dr. Moore* (London); *Dr. Lanyon* (Lostwithiel); *Mr. T. C. Lewis* (Wolverhampton); *Dr. W. F. Henderson* (Clapham); *Dr. Thompson* (Stalybridge); *Mr. T. B. Hooper* (Reading); *Dr. Ayres* (Thame); *Mr. Adam Thompson* (New Bond-street); *Dr. Frederick Bird, Mr. Charles Brookes*, and *Dr. Reid.*

W. S. W. should procure the work of Mr. Bell.

Errata.—In Dr. Smyth's paper on Impotence and Sterility, page 534, line 31, for "clear infusion" read *compound* infusion.—Column 2, for "organised systems" read *systems and organs.*—Page 535, read line 4 thus: "It is *to* this physiological circumstance," &c.—Page 536, line 19, erase the words "so of."